

Exhibit 1



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(54) **METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING**

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(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.

(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998

(Continued)

OTHER PUBLICATIONS

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

(Continued)

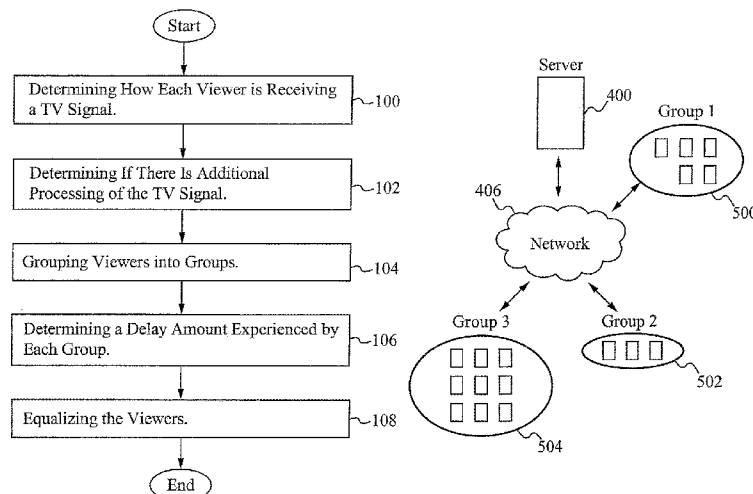
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(57) **ABSTRACT**

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

60 Claims, 5 Drawing Sheets



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Related U.S. Application Data	(56)	References Cited
continuation of application No. 15/496,404, filed on Apr. 25, 2017, now Pat. No. 9,878,243, which is a continuation of application No. 14/219,598, filed on Mar. 19, 2014, now Pat. No. 9,662,576, which is a continuation of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530.		U.S. PATENT DOCUMENTS
(60) Provisional application No. 60/791,793, filed on Apr. 12, 2006.		
(51) Int. Cl.		
<i>A63F 13/332</i> (2014.01)	4,141,548 A	2/1979 Everton
<i>A63F 13/216</i> (2014.01)	4,270,755 A	6/1981 Willhide et al.
<i>A63F 13/795</i> (2014.01)	4,386,377 A	5/1983 Hunter, Jr.
<i>A63F 13/338</i> (2014.01)	4,496,148 A	1/1985 Morstain et al.
<i>H04N 21/472</i> (2011.01)	4,521,803 A	6/1985 Glittinger
<i>H04N 21/61</i> (2011.01)	4,592,546 A	6/1986 Fascenda et al.
<i>H04N 5/04</i> (2006.01)	4,816,904 A	3/1989 McKenna et al.
<i>H04N 21/436</i> (2011.01)	4,918,603 A	4/1990 Hughes et al.
<i>H04N 21/27</i> (2011.01)	4,930,010 A	5/1990 MacDonald
<i>H04N 21/43</i> (2011.01)	5,013,038 A	5/1991 Luvenberg
<i>H04N 21/435</i> (2011.01)	5,018,736 A	5/1991 Pearson et al.
<i>H04N 21/478</i> (2011.01)	5,035,422 A	7/1991 Berman
<i>A63F 13/22</i> (2014.01)	5,073,931 A	12/1991 Audebert et al.
<i>A63F 13/92</i> (2014.01)	5,083,271 A	1/1992 Thatcher et al.
<i>H04N 21/2385</i> (2011.01)	5,083,800 A	1/1992 Lockton
<i>H04N 21/258</i> (2011.01)	5,119,295 A	6/1992 Kapur
<i>H04N 21/442</i> (2011.01)	5,120,076 A	6/1992 Luxenberg et al.
<i>H04N 21/45</i> (2011.01)	5,213,337 A	5/1993 Sherman
<i>A63F 13/32</i> (2014.01)	5,227,874 A	7/1993 Von Kohom
<i>A63F 13/285</i> (2014.01)	5,256,863 A	10/1993 Ferguson
<i>A63F 13/50</i> (2014.01)	5,263,723 A	11/1993 Pearson et al.
<i>H04N 21/24</i> (2011.01)	5,283,734 A	2/1994 Von Kohom
	5,327,485 A	7/1994 Leaden
	5,343,236 A	8/1994 Koppe et al.
	5,343,239 A	8/1994 Lappington et al.
	5,417,424 A	5/1995 Snowden
	5,462,275 A	10/1995 Lowe et al.
	5,479,492 A	12/1995 Hofstee et al.
	5,488,659 A	1/1996 Millani
	5,519,433 A	5/1996 Lappington
	5,530,483 A	6/1996 Cooper
	5,553,120 A	9/1996 Katz
	5,566,291 A	10/1996 Boulton et al.
	5,585,975 A	12/1996 Bliss
	5,586,257 A	12/1996 Perlman
	5,589,765 A	12/1996 Ohmart et al.
	5,594,938 A	1/1997 Engel
	5,618,232 A	4/1997 Martin
	5,628,684 A	5/1997 Jean-Etienne
	5,636,920 A	6/1997 Shur et al.
	5,638,113 A	6/1997 Lappington
	5,643,088 A	7/1997 Vaughn et al.
	5,663,757 A	9/1997 Morales
	5,759,101 A	6/1998 Won Kohom
	5,761,606 A	6/1998 Wolzien
	5,762,552 A	6/1998 Young et al.
	5,764,275 A	6/1998 Lappington et al.
	5,794,210 A	8/1998 Goldhaber et al.
	5,805,230 A	9/1998 Staron
	5,813,913 A	9/1998 Berner et al.
	5,818,438 A	10/1998 Howe et al.
	5,828,843 A	10/1998 Grimm
	5,838,774 A	11/1998 Weiser, Jr.
	5,838,909 A	11/1998 Roy
	5,846,132 A	12/1998 Junkin
	5,848,397 A	12/1998 Marsh et al.
	5,860,862 A	1/1999 Junkin
	5,894,556 A	4/1999 Grimm
	5,916,024 A	6/1999 Von Kohom
	5,870,683 A	9/1999 Wells et al.
	5,970,143 A	10/1999 Schneier et al.
	5,971,854 A	10/1999 Pearson et al.
	5,987,440 A	11/1999 O'Neil et al.
	6,009,458 A	12/1999 Hawkins et al.
	6,015,344 A	1/2000 Kelly et al.
	6,016,337 A	1/2000 Pykalisto
	6,038,599 A	3/2000 Black
	6,042,477 A	3/2000 Addink
	6,064,449 A	5/2000 White
	6,104,815 A	8/2000 Alcorn et al.
	6,110,041 A	8/2000 Walker et al.
	6,117,013 A	9/2000 Elba
	6,126,543 A	10/2000 Friedman
	6,128,660 A	10/2000 Grimm
	6,135,881 A	10/2000 Abbott et al.
USPC 463/42, 40; 360/65 See application file for complete search history.		

US 11,185,770 B2

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(56)

References Cited

U.S. PATENT DOCUMENTS

6,154,131	A *	11/2000	Jones, II	A63F 3/00157 273/138.1	6,908,389	B1	6/2005	Puskala
6,174,237	B1	1/2001	Stephenson		6,942,574	B1	9/2005	LeMay et al.
6,182,084	B1	1/2001	Cockrell et al.		6,944,228	B1	9/2005	Dakss et al.
6,193,610	B1	2/2001	Junkin		6,960,088	B1	11/2005	Long
6,222,642	B1	4/2001	Farrell et al.		6,978,053	B1	12/2005	Sarachik et al.
6,233,736	B1	5/2001	Wolzien		7,001,279	B1	2/2006	Barber et al.
6,251,017	B1	6/2001	Leason et al.		7,029,394	B2	4/2006	Leen et al.
6,263,447	B1	7/2001	French		7,035,626	B1	4/2006	Luciano, Jr.
6,267,670	B1	7/2001	Walker		7,035,653	B2	4/2006	Simon et al.
6,287,199	B1	9/2001	McKeown et al.		7,058,592	B1	6/2006	Heckerman et al.
6,293,868	B1	9/2001	Bernard		7,076,434	B1	7/2006	Newman et al.
6,312,336	B1	11/2001	Handelman et al.		7,085,552	B2	8/2006	Buckley
6,343,320	B1	1/2002	Fairchild		7,116,310	B1	10/2006	Evans et al.
6,345,297	B1	2/2002	Grimm		7,117,517	B1	10/2006	Milazzo et al.
6,371,855	B1	4/2002	Gavriloff		7,120,924	B1	10/2006	Katcher et al.
6,373,462	B1	4/2002	Pan		7,124,410	B2	10/2006	Berg
6,411,969	B1	6/2002	Tam		7,125,336	B2	10/2006	Anttila et al.
6,416,414	B1	7/2002	Stadelmann		7,136,871	B2	11/2006	Ozer et al.
6,418,298	B1	7/2002	Sonnenfeld		7,144,011	B2	12/2006	Asher et al.
6,425,828	B2	7/2002	Walker et al.		7,169,050	B1	1/2007	Tyler
6,434,398	B1	8/2002	Inselberg		7,187,658	B2	3/2007	Koyanagi
6,446,262	B1	9/2002	Malaure et al.		7,191,447	B1	3/2007	Ellis et al.
6,470,180	B1	10/2002	Kotzin et al.		7,192,352	B2	3/2007	Walker et al.
6,475,090	B2	11/2002	Gregory		7,194,758	B1	3/2007	Waki et al.
6,524,189	B1	2/2003	Rautila		7,228,349	B2	6/2007	Barone, Jr. et al.
6,527,641	B1	3/2003	Sinclair et al.		7,231,630	B2	6/2007	Acott et al.
6,530,082	B1	3/2003	Del Sesto et al.		7,233,922	B2	6/2007	Asher et al.
6,536,037	B1	3/2003	Guheen et al.		7,240,093	B1	7/2007	Danieli et al.
6,578,068	B1	6/2003	Bowma-Amuah		7,244,181	B2	7/2007	Wang et al.
6,594,098	B1	7/2003	Sutardja		7,249,367	B2	7/2007	Bove, Jr. et al.
6,604,997	B2	7/2003	Saidakovsky et al.		7,254,605	B1	8/2007	Strum
6,610,953	B1	8/2003	Tao et al.		7,260,782	B2	8/2007	Wallace et al.
6,611,755	B1	8/2003	Coffee		RE39,818	E	9/2007	Slifer
6,648,760	B1	11/2003	Nicastro		7,283,830	B2	10/2007	Buckley
6,659,860	B1	12/2003	Yamamoto et al.		7,288,027	B2	10/2007	Overton
6,659,861	B1	12/2003	Faris		7,341,517	B2	3/2008	Asher et al.
6,659,872	B1	12/2003	Kaufman et al.		7,343,617	B1	3/2008	Kartcher et al.
6,690,661	B1	2/2004	Agarwal et al.		7,347,781	B2	3/2008	Schultz
6,697,869	B1	2/2004	Mallart		7,351,149	B1	4/2008	Simon et al.
6,718,350	B1	4/2004	Karbowski		7,367,042	B1	4/2008	Dakss et al.
6,752,396	B2	6/2004	Smith		7,379,705	B1	5/2008	Rados et al.
6,758,754	B1	7/2004	Lavanchy et al.		7,389,144	B1	6/2008	Osorio
6,758,755	B2	7/2004	Kelly et al.		7,430,718	B2	9/2008	Garipey-Viles
6,760,595	B2	7/2004	Insellberg		7,452,273	B2	11/2008	Amaitis et al.
6,763,377	B1	7/2004	Balknap et al.		7,460,037	B2	12/2008	Cattone et al.
6,766,524	B1	7/2004	Matheny et al.		7,461,067	B2	12/2008	Dewing et al.
6,774,926	B1	8/2004	Ellis et al.		7,502,610	B2	3/2009	Maher
6,785,561	B1	8/2004	Kim		7,510,474	B2	3/2009	Carter, Sr.
6,801,380	B1	10/2004	Satardja		7,517,282	B1	4/2009	Pryor
6,806,889	B1	10/2004	Malaure et al.		7,534,169	B2	5/2009	Amaitis et al.
6,807,675	B1	10/2004	Millard et al.		7,543,052	B1	6/2009	Cesa Klein
6,811,482	B2	11/2004	Letovsky		7,562,134	B1	7/2009	Fingerhut et al.
6,811,487	B2	11/2004	Sengoku		7,602,808	B2	10/2009	Ullmann
6,816,628	B1	11/2004	Sarachik et al.		7,610,330	B1	10/2009	Quinn
6,817,947	B2	11/2004	Tanskanen		7,614,944	B1	11/2009	Hughes et al.
6,824,469	B2	11/2004	Allibhoy et al.		7,630,986	B1	12/2009	Herz et al.
6,837,789	B2	1/2005	Garahi et al.		7,693,781	B2	4/2010	Asher et al.
6,837,791	B1	1/2005	McNutt et al.		7,699,707	B2	4/2010	Bahou
6,840,861	B2	1/2005	Jordan et al.		7,702,723	B2	4/2010	Dyl
6,845,389	B1	1/2005	Sen		7,711,628	B2	5/2010	Davie et al.
6,846,239	B2	1/2005	Washio		7,729,286	B2	6/2010	Mishra
6,857,122	B1	2/2005	Takeda et al.		7,753,772	B1	7/2010	Walker
6,863,610	B2	3/2005	Vancraeynest		7,753,789	B2	7/2010	Walker et al.
6,870,720	B2	3/2005	Iwata et al.		7,780,528	B2	8/2010	Hirayama
6,871,226	B1	3/2005	Ensley et al.		7,828,661	B1	11/2010	Fish
6,873,610	B1	3/2005	Noever		7,835,961	B2	11/2010	Davie et al.
6,884,166	B2	4/2005	Leen et al.		7,860,993	B2	12/2010	Chintala
6,884,172	B1	4/2005	Lloyd et al.		7,886,003	B2	2/2011	Newman
6,887,159	B2	5/2005	Leen et al.		7,907,211	B2	3/2011	Oostveen et al.
6,888,929	B1	5/2005	Saylor		7,907,598	B2	3/2011	Anisimov
6,893,347	B1	5/2005	Zilliacus et al.		7,925,756	B1	4/2011	Riddle
6,898,762	B2	5/2005	Ellis et al.		7,926,810	B2	4/2011	Fisher et al.
6,899,628	B2	5/2005	Leen et al.		7,937,318	B2	5/2011	Davie et al.
6,903,681	B2	6/2005	Faris		7,941,482	B2	5/2011	Bates
					7,941,804	B1	5/2011	Herington
					7,976,389	B2	7/2011	Cannon et al.
					8,002,618	B1	8/2011	Lockton et al.
					8,006,314	B2	8/2011	Wold
					8,025,565	B2	9/2011	Leen et al.

US 11,185,770 B2

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(56)

References Cited

U.S. PATENT DOCUMENTS

8,028,315 B1	9/2011	Barber	9,314,701 B2	4/2016	Lockton et al.
8,082,150 B2	12/2011	Wold	9,355,518 B2	5/2016	Amaitis et al.
8,086,445 B2	12/2011	Wold et al.	9,406,189 B2	8/2016	Scott et al.
8,086,510 B2	12/2011	Amaitis et al.	9,430,901 B2	8/2016	Amaitis et al.
8,092,303 B2	1/2012	Amaitis et al.	9,457,272 B2	10/2016	Lockton et al.
8,105,141 B2	1/2012	Leen et al.	9,498,724 B2	11/2016	Lockton et al.
8,107,674 B2	1/2012	Davis et al.	9,501,904 B2	11/2016	Lockton
8,109,827 B2	2/2012	Cahill et al.	9,504,922 B2	11/2016	Lockton et al.
8,128,474 B2	3/2012	Amaitis et al.	9,511,287 B2	12/2016	Lockton et al.
8,147,313 B2	4/2012	Amaitis et al.	9,526,991 B2	12/2016	Lockton et al.
8,147,373 B2	4/2012	Amaitis et al.	9,536,396 B2	1/2017	Amaitis et al.
8,149,530 B1	4/2012	Lockton et al.	9,556,991 B2	1/2017	Furuya
8,155,637 B2	4/2012	Fujisawa	9,604,140 B2	3/2017	Lockton et al.
8,162,759 B2	4/2012	Yamaguchi	9,652,937 B2	5/2017	Lockton
8,176,518 B1	5/2012	Junkin et al.	9,662,576 B2	5/2017	Lockton et al.
8,186,682 B2	5/2012	Amaitis et al.	9,662,577 B2	5/2017	Lockton et al.
8,204,808 B2	6/2012	Amaitis et al.	9,672,692 B2	6/2017	Lockton
8,219,617 B2	7/2012	Ashida	9,687,738 B2	6/2017	Lockton et al.
8,240,669 B2	8/2012	Asher et al.	9,687,739 B2	6/2017	Lockton et al.
8,246,048 B2	8/2012	Amaitis et al.	9,707,482 B2	7/2017	Lockton et al.
8,267,403 B2	9/2012	Fisher et al.	9,716,918 B1	7/2017	Lockton et al.
8,342,924 B2	1/2013	Leen et al.	9,724,603 B2	8/2017	Lockton et al.
8,342,942 B2	1/2013	Amaitis et al.	9,744,453 B2	8/2017	Lockton et al.
8,353,763 B2	1/2013	Amaitis et al.	9,805,549 B2	10/2017	Asher et al.
8,376,855 B2	2/2013	Lockton et al.	9,821,233 B2	11/2017	Lockton et al.
8,396,001 B2	3/2013	Jung	9,878,243 B2	1/2018	Lockton et al.
8,397,257 B1	3/2013	Barber	9,881,337 B2	1/2018	Jaycob et al.
8,465,021 B2	6/2013	Asher et al.	9,901,820 B2	2/2018	Lockton et al.
8,473,393 B2	6/2013	Davie et al.	9,908,053 B2	3/2018	Lockton et al.
8,474,819 B2	7/2013	Asher et al.	9,919,210 B2	3/2018	Lockton
8,535,138 B2	9/2013	Amaitis et al.	9,919,211 B2	3/2018	Lockton et al.
8,538,563 B1	9/2013	Barber	9,919,221 B2	3/2018	Lockton et al.
8,543,487 B2	9/2013	Asher et al.	9,978,217 B2	5/2018	Lockton
8,555,313 B2	10/2013	Newman	9,993,730 B2	6/2018	Lockton et al.
8,556,691 B2	10/2013	Leen et al.	9,999,834 B2	6/2018	Lockton et al.
8,585,490 B2	11/2013	Amaitis et al.	10,052,557 B2	8/2018	Lockton et al.
8,622,798 B2	1/2014	Lockton et al.	10,089,815 B2	10/2018	Asher et al.
8,632,392 B2	1/2014	Shore et al.	10,096,210 B2	10/2018	Amaitis et al.
8,638,517 B2	1/2014	Lockton et al.	10,137,369 B2	11/2018	Lockton et al.
8,641,511 B2	2/2014	Ginsberg et al.	10,150,031 B2	12/2018	Lockton et al.
8,659,848 B2	2/2014	Lockton et al.	10,165,339 B2	12/2018	Huske et al.
8,672,751 B2	3/2014	Leen et al.	10,186,116 B2	1/2019	Lockton
8,699,168 B2	4/2014	Lockton et al.	10,195,526 B2	2/2019	Lockton et al.
8,705,195 B2	4/2014	Lockton	10,226,698 B1	3/2019	Lockton et al.
8,708,789 B2	4/2014	Asher et al.	10,226,705 B2	3/2019	Lockton et al.
8,717,701 B2	5/2014	Lockton et al.	10,232,270 B2	3/2019	Lockton et al.
8,727,352 B2	5/2014	Amaitis et al.	10,248,290 B2	4/2019	Galfond
8,734,227 B2	5/2014	Leen et al.	10,279,253 B2	5/2019	Lockton
8,737,004 B2	5/2014	Lockton et al.	10,653,955 B2	5/2020	Lockton
8,738,694 B2	5/2014	Huske et al.	10,695,672 B2	6/2020	Lockton et al.
8,771,058 B2	7/2014	Alderucci et al.	10,709,987 B2	7/2020	Lockton et al.
8,780,482 B2	7/2014	Lockton et al.	10,721,543 B2	7/2020	Huske et al.
8,805,732 B2	8/2014	Davie et al.	2001/0004609 A1	6/2001	Walker et al.
8,813,112 B1	8/2014	Cibula et al.	2001/0005670 A1	6/2001	Lahtinen
8,814,664 B2	8/2014	Amaitis et al.	2001/0013067 A1	8/2001	Koyanagi
8,817,408 B2	8/2014	Lockton et al.	2001/0013125 A1	8/2001	Kitsukawa et al.
8,837,072 B2	9/2014	Lockton et al.	2001/0020298 A1	9/2001	Rector, Jr. et al.
8,849,225 B1	9/2014	Choti	2001/0032333 A1	10/2001	Flickinger
8,849,255 B2	9/2014	Choti	2001/0036272 A1	11/2001	Hirayama
8,858,313 B1	10/2014	Selfors	2001/0036853 A1	11/2001	Thomas
8,870,639 B2	10/2014	Lockton et al.	2001/0044339 A1	11/2001	Cordero
8,935,715 B2	1/2015	Cibula et al.	2001/0054019 A1	12/2001	de Fabrega
9,056,251 B2	6/2015	Lockton	2002/0010789 A1	1/2002	Lord
9,067,143 B2	6/2015	Lockton et al.	2002/0018477 A1	2/2002	Katz
9,069,651 B2	6/2015	Barber	2002/0026321 A1	2/2002	Faris
9,076,303 B1	7/2015	Park	2002/0029381 A1	3/2002	Inselberg
9,098,883 B2	8/2015	Asher et al.	2002/0035609 A1	3/2002	Lessard
9,111,417 B2	8/2015	Leen et al.	2002/0037766 A1	3/2002	Muniz
9,205,339 B2	12/2015	Cibula et al.	2002/0069265 A1	3/2002	Bountour
9,233,293 B2	1/2016	Lockton	2002/0042293 A1	4/2002	Ubale et al.
9,258,601 B2	2/2016	Lockton et al.	2002/0046099 A1	4/2002	Frengut et al.
9,270,789 B2	2/2016	Huske et al.	2002/0054088 A1	5/2002	Tanskanen et al.
9,289,692 B2	3/2016	Barber	2002/0055385 A1	5/2002	Otsu
9,306,952 B2	4/2016	Burman et al.	2002/0056089 A1	5/2002	Houston
9,314,686 B2	4/2016	Lockton	2002/0059094 A1	5/2002	Hosea et al.
			2002/0059623 A1	5/2002	Rodriguez et al.
			2002/0069076 A1	6/2002	Faris
			2002/0076084 A1	6/2002	Tian
			2002/0078176 A1	6/2002	Nomura et al.

US 11,185,770 B2

Page 5

(56)

References Cited

U.S. PATENT DOCUMENTS

2002/0083461 A1	6/2002	Hutcheson	2004/0088729 A1	5/2004	Petrovic et al.
2002/0091833 A1	7/2002	Grimm	2004/0093302 A1	5/2004	Baker et al.
2002/0095333 A1	7/2002	Jokinen et al.	2004/0152454 A1	5/2004	Kauppinen
2002/0097983 A1	7/2002	Wallace et al.	2004/0107138 A1	6/2004	Maggio
2002/0099709 A1	7/2002	Wallace	2004/0117831 A1	6/2004	Ellis et al.
2002/0100063 A1	7/2002	Herigstad et al.	2004/0117839 A1	6/2004	Watson et al.
2002/0103696 A1	8/2002	Huang et al.	2004/0125877 A1	7/2004	Chang
2002/0105535 A1	8/2002	Wallace et al.	2004/0128319 A1	7/2004	Davis et al.
2002/0107073 A1	8/2002	Binney	2004/0139158 A1	7/2004	Datta
2002/0108112 A1	8/2002	Wallace et al.	2004/0139482 A1	7/2004	Hale
2002/0108125 A1	8/2002	Joao	2004/0148638 A1	7/2004	Weisman et al.
2002/0108127 A1	8/2002	Lew et al.	2004/0152517 A1	8/2004	Haedisty
2002/0112249 A1	8/2002	Hendricks et al.	2004/0152519 A1	8/2004	Wang
2002/0115488 A1	8/2002	Berry et al.	2004/0158855 A1	8/2004	Gu et al.
2002/0119821 A1	8/2002	Sen	2004/0162124 A1	8/2004	Barton et al.
2002/0120930 A1	8/2002	Yona	2004/0166873 A1	8/2004	Simic
2002/0124247 A1	9/2002	Houghton	2004/0176162 A1	9/2004	Rothschild
2002/0132614 A1	9/2002	Vanlujit et al.	2004/0178923 A1	9/2004	Kuang
2002/0133817 A1	9/2002	Markel	2004/0183824 A1	9/2004	Benson
2002/0133827 A1	9/2002	Newman et al.	2004/0185881 A1	9/2004	Lee
2002/0142843 A1	10/2002	Roelofs	2004/0190779 A1	9/2004	Sarachik et al.
2002/0144273 A1	10/2002	Reto	2004/0198495 A1	10/2004	Cisneros et al.
2002/0147049 A1	10/2002	Carter, Sr.	2004/0201626 A1	10/2004	Lavoie
2002/0157002 A1	10/2002	Messerges et al.	2004/0203667 A1	10/2004	Shroder
2002/0157005 A1	10/2002	Bunk	2004/0203898 A1	10/2004	Bodin et al.
2002/0159576 A1	10/2002	Adams	2004/0210507 A1	10/2004	Asher et al.
2002/0162031 A1	10/2002	Levin et al.	2004/0215756 A1	10/2004	VanAntwerp
2002/0162117 A1	10/2002	Pearson	2004/0216161 A1	10/2004	Barone, Jr. et al.
2002/0165020 A1	11/2002	Koyama	2004/0216171 A1	10/2004	Barone, Jr. et al.
2002/0165025 A1	11/2002	Kawahara	2004/0224750 A1	11/2004	Ai-Ziyoud
2002/0177483 A1	11/2002	Cannon	2004/0242321 A1	12/2004	Overton
2002/0187825 A1	12/2002	Tracy	2004/0266513 A1	12/2004	Odom
2002/0198050 A1	12/2002	Patchen	2005/0005303 A1	1/2005	Barone, Jr. et al.
2003/0002638 A1	1/2003	Kaars	2005/0021942 A1	1/2005	Diehl et al.
2003/0013528 A1	1/2003	Allibhoy et al.	2005/0026699 A1	2/2005	Kinzer et al.
2003/0023547 A1	1/2003	France	2005/0028208 A1	2/2005	Ellis
2003/0040363 A1	2/2003	Sandberg	2005/0043094 A1	2/2005	Nguyen et al.
2003/0054885 A1	3/2003	Pinto et al.	2005/0076371 A1	4/2005	Nakamura
2003/0060247 A1	3/2003	Goldberg et al.	2005/0077997 A1	4/2005	Landram
2003/0066089 A1	4/2003	Anderson	2005/0060219 A1	5/2005	Ditering et al.
2003/0069828 A1	4/2003	Blazey et al.	2005/0097599 A1	5/2005	Potnick et al.
2003/0070174 A1	4/2003	Solomon	2005/0101309 A1	5/2005	Croome
2003/0078924 A1	4/2003	Liechty et al.	2005/0113164 A1	5/2005	Buecheler et al.
2003/0086691 A1	5/2003	Yu	2005/0003878 A1	6/2005	Udike
2003/0087652 A1	5/2003	Simon et al.	2005/0131984 A1	6/2005	Hofmann et al.
2003/0088648 A1	5/2003	Bellaton	2005/0138668 A1	6/2005	Gray et al.
2003/0114224 A1	6/2003	Anttila et al.	2005/0144102 A1	6/2005	Johnson
2003/0115152 A1	6/2003	Flaherty	2005/0155083 A1	7/2005	Oh
2003/0125109 A1 *	7/2003	Green G07F 17/3241 463/29	2005/0177861 A1	8/2005	Ma et al.
2003/0134678 A1	7/2003	Tanaka	2005/0210526 A1	9/2005	Levy et al.
2003/0144017 A1	7/2003	Inselberg	2005/0216838 A1	9/2005	Graham
2003/0154242 A1	8/2003	Hayes et al.	2005/0235043 A1	10/2005	Teodosiu et al.
2003/0165241 A1	9/2003	Fransdonk	2005/0239551 A1	10/2005	Griswold
2003/0177167 A1	9/2003	Lafage et al.	2005/0255901 A1	11/2005	Kreutzer
2003/0177504 A1	9/2003	Paulo et al.	2005/0256895 A1	11/2005	Dussault
2003/0189668 A1	10/2003	Newman et al.	2005/0266869 A1	12/2005	Jung
2003/0195023 A1	10/2003	Di Cesare	2005/0267969 A1	12/2005	Poikselka et al.
2003/0195807 A1	10/2003	Maggio	2005/0273804 A1	12/2005	Preisman
2003/0208579 A1	11/2003	Brady et al.	2005/0283800 A1	12/2005	Ellis et al.
2003/0211856 A1	11/2003	Zilliagus	2005/0288080 A1	12/2005	Lockton et al.
2003/0212691 A1	11/2003	Kuntala et al.	2005/0288101 A1	12/2005	Lockton et al.
2003/0216185 A1	11/2003	Varley	2005/0288812 A1	12/2005	Cheng
2003/0216857 A1	11/2003	Feldman et al.	2006/0020700 A1	1/2006	Qiu
2003/0228866 A1	12/2003	Pezeshki	2006/0025070 A1	2/2006	Kim et al.
2003/0233425 A1	12/2003	Lyons et al.	2006/0046810 A1	3/2006	Tabata
2004/0005919 A1	1/2004	Walker et al.	2006/0047772 A1	3/2006	Crutcher
2004/0014524 A1	1/2004	Pearlman	2006/0053390 A1	3/2006	Garipey-Viles
2004/0015442 A1 *	1/2004	Hmlinen G07F 17/3241 705/50	2006/0058103 A1	3/2006	Danieli
2004/0022366 A1	2/2004	Ferguson et al.	2006/0059161 A1	3/2006	Millett et al.
2004/0025190 A1	2/2004	McCalla	2006/0063590 A1	3/2006	Abassi et al.
2004/0056897 A1	3/2004	Ueda	2006/0082068 A1	4/2006	Patchen
2004/0060063 A1	3/2004	Russ et al.	2006/0087585 A1	4/2006	Seo
2004/0073915 A1	4/2004	Dureau	2006/0089199 A1	4/2006	Jordan et al.
			2006/0094409 A1	5/2006	Inselberg
			2006/0111168 A1	5/2006	Nguyen
			2006/0135253 A1	6/2006	George et al.
			2006/0148569 A1	7/2006	Beck
			2006/0156371 A1	7/2006	Maetz et al.
			2006/0174307 A1	8/2006	Hwang et al.

US 11,185,770 B2

Page 6

(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0183547 A1	8/2006	McMonigle	2010/0296511 A1	11/2010	Prodan
2006/0183548 A1	8/2006	Morris et al.	2011/0016224 A1	1/2011	Riley
2006/0190654 A1	8/2006	Joy	2011/0053681 A1	3/2011	Goldman
2006/0205483 A1	9/2006	Meyer et al.	2011/0065490 A1	3/2011	Lutnick
2006/0205509 A1	9/2006	Hirota	2011/0081958 A1	4/2011	Herman
2006/0205510 A1	9/2006	Lauper	2011/0116461 A1	5/2011	Holt
2006/0217198 A1	9/2006	Johnson	2011/0130197 A1	6/2011	Bythar et al.
2006/0236352 A1	10/2006	Scott, III	2011/0227287 A1	9/2011	Reabe
2006/0248553 A1	11/2006	Mikkelsen et al.	2011/0269548 A1	11/2011	Barclay et al.
2006/0248564 A1	11/2006	Zinevitch	2011/0306428 A1	12/2011	Lockton et al.
2006/0256865 A1	11/2006	Westerman	2012/0058808 A1	3/2012	Lockton
2006/0256868 A1	11/2006	Westerman	2012/0115585 A1	5/2012	Goldman
2006/0269120 A1	11/2006	Nehmadi et al.	2012/0157178 A1	6/2012	Lockton
2006/0285586 A1	12/2006	Westerman	2012/0264496 A1	10/2012	Behrman et al.
2007/0004516 A1	1/2007	Jordan et al.	2012/0282995 A1	11/2012	Allen et al.
2007/0013547 A1	1/2007	Boaz	2012/0295686 A1	11/2012	Lockton
2007/0019826 A1	1/2007	Horbach et al.	2013/0005453 A1	1/2013	Nguyen et al.
2007/0028272 A1	2/2007	Lockton	2013/0072271 A1	3/2013	Lockton et al.
2007/0037623 A1	2/2007	Romik	2013/0079081 A1	3/2013	Lockton et al.
2007/0054695 A1	3/2007	Huske et al.	2013/0079092 A1	3/2013	Lockton et al.
2007/0078009 A1	4/2007	Lockton et al.	2013/0079093 A1	3/2013	Lockton et al.
2007/0083920 A1	4/2007	Mizoguchi et al.	2013/0079135 A1	3/2013	Lockton et al.
2007/0086465 A1	4/2007	Paila et al.	2013/0079150 A1	3/2013	Lockton et al.
2007/0087832 A1	4/2007	Abbott	2013/0079151 A1	3/2013	Lockton et al.
2007/0093296 A1	4/2007	Asher	2013/0196774 A1	8/2013	Lockton et al.
2007/0101358 A1	5/2007	Ambady	2013/0225285 A1	8/2013	Lockton
2007/0106721 A1	5/2007	Schloter	2013/0225299 A1	8/2013	Lockton
2007/0107010 A1	5/2007	Jolna et al.	2014/0031134 A1	1/2014	Lockton et al.
2007/0129144 A1	6/2007	Katz	2014/0100011 A1	4/2014	Gingher
2007/0147870 A1	7/2007	Nagashima et al.	2014/0106832 A1	4/2014	Lockton et al.
2007/0162328 A1	7/2007	Reich	2014/0128139 A1	5/2014	Shuster et al.
2007/0183744 A1	8/2007	Koizumi	2014/0155130 A1	6/2014	Lockton et al.
2007/0197247 A1	8/2007	Inselberg	2014/0155134 A1	6/2014	Lockton
2007/0210908 A1	9/2007	Putterman et al.	2014/0206446 A1	7/2014	Lockton et al.
2007/0219856 A1	9/2007	Ahmad-Taylor	2014/0237025 A1	8/2014	Huske et al.
2007/0222652 A1	9/2007	Cattone et al.	2014/0248952 A1	9/2014	Cibula et al.
2007/0226062 A1	9/2007	Hughes et al.	2014/0256432 A1	9/2014	Lockton et al.
2007/0238525 A1	10/2007	Suomela	2014/0279439 A1	9/2014	Brown
2007/0243936 A1	10/2007	Binstock et al.	2014/0287832 A1	9/2014	Lockton et al.
2007/0244570 A1	10/2007	Speiser et al.	2014/0335961 A1	11/2014	Lockton et al.
2007/0244585 A1	10/2007	Speiser et al.	2014/0335962 A1	11/2014	Lockton et al.
2007/0244749 A1	10/2007	Speiser et al.	2014/0378212 A1	12/2014	Sims
2007/0265089 A1	11/2007	Robarts	2015/0011310 A1	1/2015	Lockton et al.
2007/0294410 A1	12/2007	Pandya	2015/0067732 A1	3/2015	Howe et al.
2008/0005037 A1	1/2008	Hammad	2015/0148130 A1	5/2015	Cibula et al.
2008/0013927 A1	1/2008	Kelly et al.	2015/0238839 A1	8/2015	Lockton
2008/0051201 A1	2/2008	Lore	2015/0238873 A1	8/2015	Arnone et al.
2008/0066129 A1	3/2008	Katcher et al.	2015/0258452 A1	9/2015	Lockton et al.
2008/0076497 A1	3/2008	Kiskis et al.	2015/0356831 A1	12/2015	Osibodu
2008/0104630 A1	5/2008	Bruce	2016/0023116 A1	1/2016	Wire
2008/0146337 A1	6/2008	Halonen	2016/0045824 A1	2/2016	Lockton et al.
2008/0169605 A1	7/2008	Shuster et al.	2016/0049049 A1	2/2016	Lockton
2008/0222672 A1	9/2008	Piesing	2016/0054872 A1	2/2016	Cibula et al.
2008/0240681 A1	10/2008	Fukushima	2016/0082357 A1	3/2016	Lockton
2008/0248865 A1	10/2008	Tedesco	2016/0121208 A1	5/2016	Lockton et al.
2008/0270288 A1	10/2008	Butterly et al.	2016/0134947 A1	5/2016	Huske et al.
2008/0288600 A1	11/2008	Clark	2016/0217653 A1	7/2016	Meyer
2009/0011781 A1	1/2009	Merrill et al.	2016/0271501 A1	9/2016	Balsbaugh
2009/0094632 A1	4/2009	Newman et al.	2016/0361647 A1	12/2016	Lockton et al.
2009/0103892 A1	4/2009	Hirayama	2016/0375362 A1	12/2016	Lockton et al.
2009/0186676 A1	7/2009	Amaitis et al.	2017/0036110 A1	2/2017	Lockton et al.
2009/0163271 A1	9/2009	George et al.	2017/0036117 A1	2/2017	Lockton et al.
2009/0228351 A1	9/2009	Rijnsbrij	2017/0043259 A1	2/2017	Lockton et al.
2009/0234674 A1	9/2009	Wurster	2017/0053498 A1	2/2017	Lockton
2009/0264188 A1	10/2009	Soukup	2017/0065891 A1	3/2017	Lockton et al.
2009/0271512 A1	10/2009	Jorgensen	2017/0098348 A1	4/2017	Odom
2009/0325716 A1*	12/2009	Harari	2017/0103615 A1	4/2017	Theodosopoulos
		G07F 17/3288	2017/0128840 A1	5/2017	Croci
		463/42	2017/0221314 A1	8/2017	Lockton
2010/0099421 A1	4/2010	Patel et al.	2017/0225071 A1	8/2017	Lockton et al.
2010/0099471 A1	4/2010	Feeney et al.	2017/0225072 A1	8/2017	Lockton et al.
2010/0107194 A1	4/2010	McKissick et al.	2017/0232340 A1	8/2017	Lockton
2010/0120503 A1	5/2010	Hoffman et al.	2017/0243438 A1	8/2017	Merati
2010/0137057 A1	6/2010	Fleming	2017/0249801 A1	8/2017	Malek
2010/0203936 A1	8/2010	Levy	2017/0252649 A1	9/2017	Lockton et al.
2010/0279764 A1	11/2010	Allen et al.	2017/0259173 A1	9/2017	Lockton et al.
			2017/0264961 A1	9/2017	Lockton
			2017/0282067 A1	10/2017	Lockton et al.
			2017/0296916 A1	10/2017	Lockton et al.

US 11,185,770 B2

Page 7

(56)

References Cited

U.S. PATENT DOCUMENTS

2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102	A3 6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999
JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01/039506	A2 5/2001
WO	01/65743	A1 9/2001
WO	02/03698	A1 10/2002
WO	2005064506	A1 7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007
WO	2007016575	2/2007
WO	2007041667	4/2007
WO	2008027811	A2 3/2008
WO	2008115858	A1 9/2008

OTHER PUBLICATIONS

'Ark 4.0 Standard Edition, Technical Overview' www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games by Tristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Performance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1>.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

<http://help.yahoo.com/help/us/tour/tourn-03.html>.

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020, <http://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQSQS7M3GD>.

Gambling Commission, "Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcommission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.

Sipko et al., "Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo To Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from, <http://www.winviewgames.com/press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.

The International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

* cited by examiner

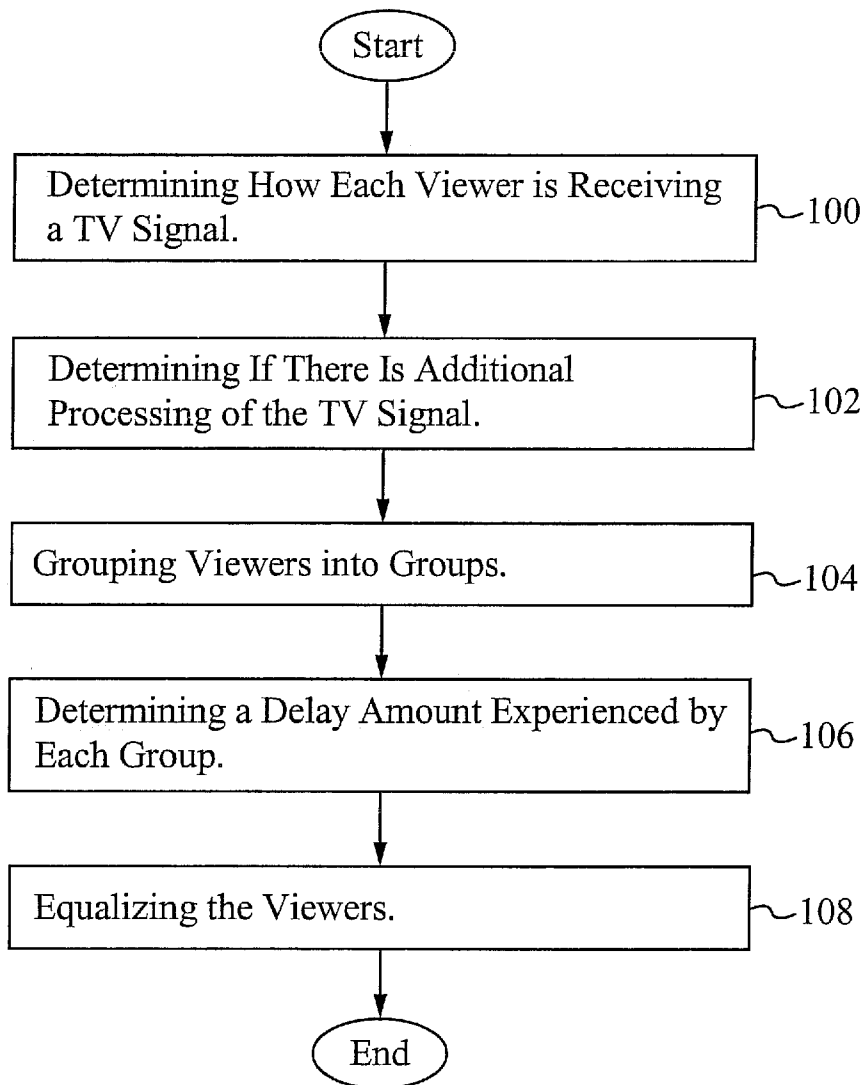
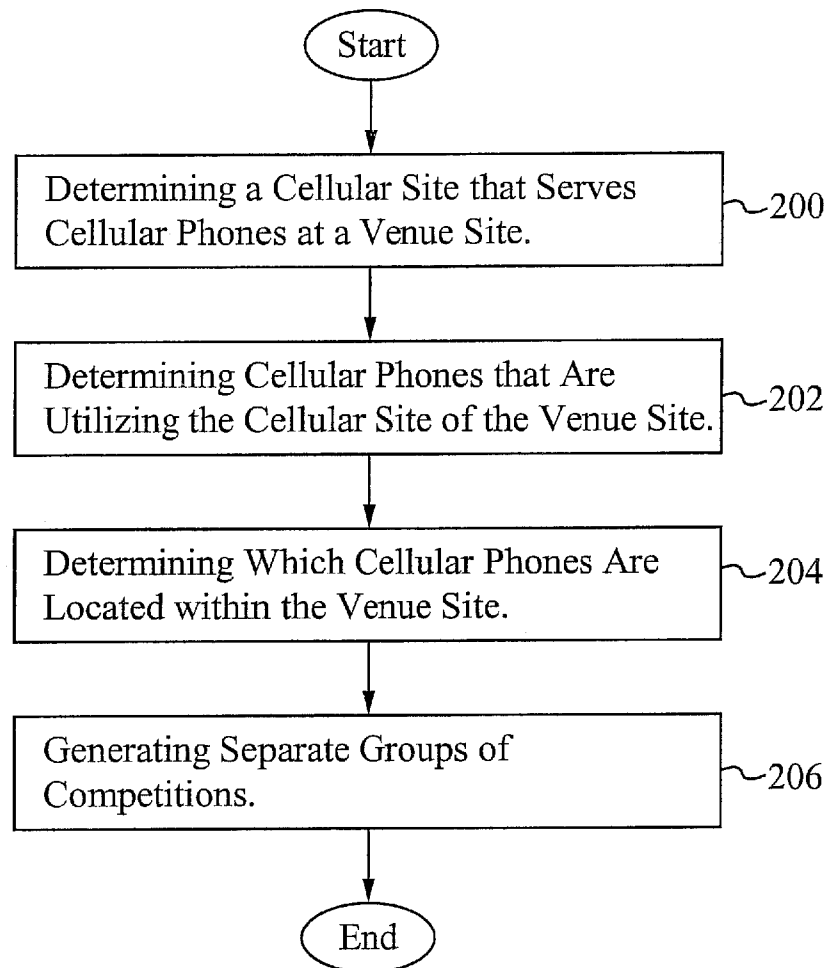


Fig. 1

**Fig. 2**

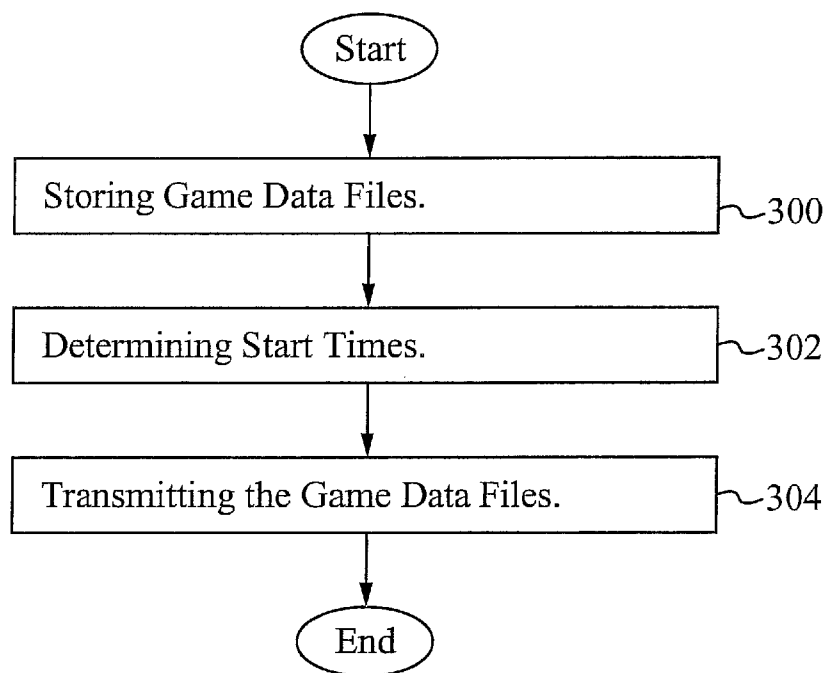


Fig. 3

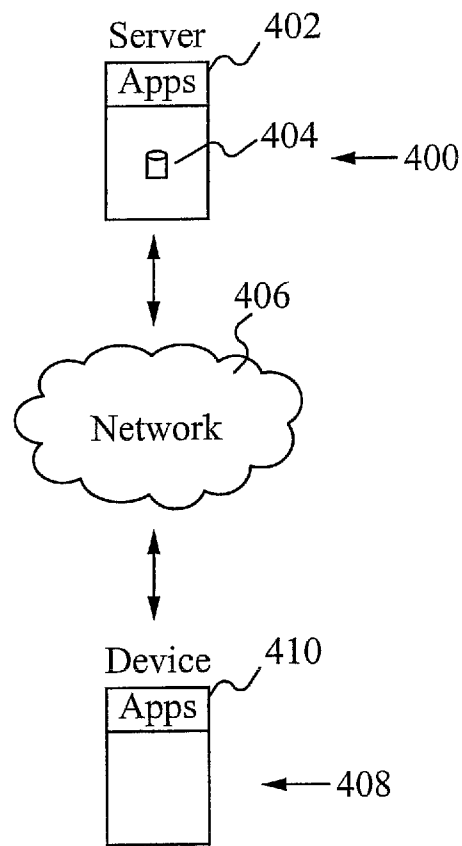


Fig. 4

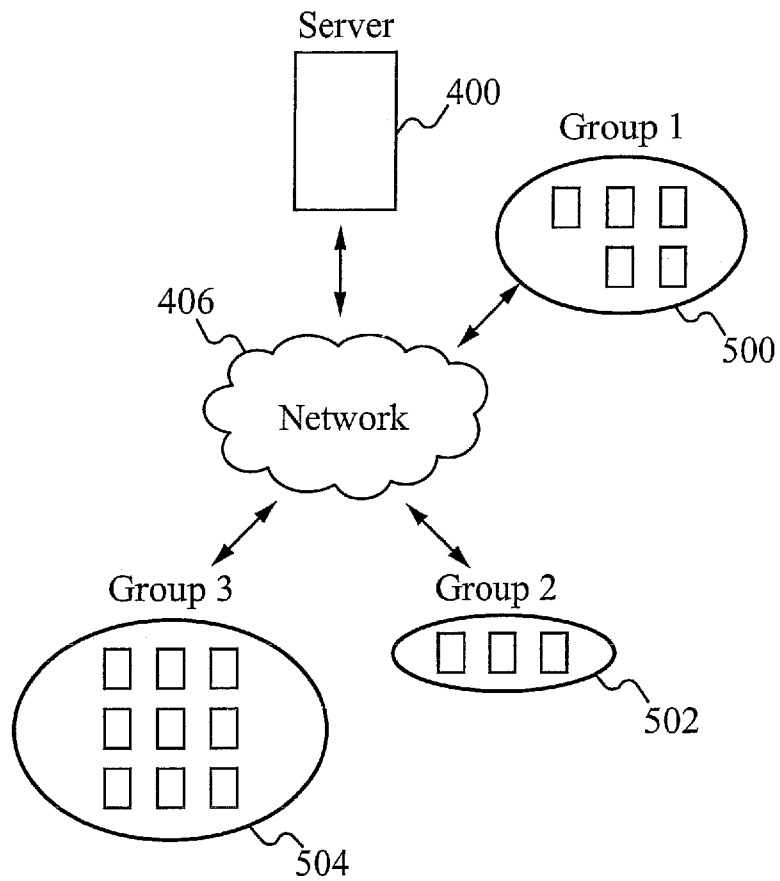


Fig. 5

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**METHODOLOGY FOR EQUALIZING
SYSTEMIC LATENCIES IN TELEVISION
RECEPTION IN CONNECTION WITH
GAMES OF SKILL PLAYED IN
CONNECTION WITH LIVE TELEVISION
PROGRAMMING**

RELATED APPLICATION(S)

This Patent Application is a continuation of U.S. patent application Ser. No. 15/846,004, filed Dec. 18, 2017 and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/496,404, filed Apr. 25, 2017 and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 14/219,598, filed Mar. 19, 2014 and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012 and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," now issued as U.S. Pat. No. 8,149,530, which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common

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start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish network may experience a 3 second delay compared to an individual in California using a cable network. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and

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variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

In one aspect, a method of equalizing effects of latency differences in a game of skill comprises grouping participants into a set of cohorts viewing a telecast delivered by identical transmission and reception systems, determining an amount of delay for each cohort in the set of cohorts and substantially equalizing the set of cohorts through adjustment of the amount of delay. The method further comprises determining how each participant receives a television signal. How each participant receives a television signal is selected from the group consisting of an over the air broadcast, a cable system and a satellite system. The participants are grouped based on how the participants receive a television signal. The method further comprises determining if there is additional processing of a television signal in a reception location. The additional processing occurs within a participant's location selected from the group consisting of a public place, a home, an office and a bar. Since each cable system may impose different delay at their head-ends, the specific cable provider is identified. Determining the amount of delay comprises one or more of requiring the participants to answer questions related to their television system service, requiring the participants to mark on a game playing client device, a precise time that a predetermined audio or visual event is viewed on a television program, utilizing a GPS function in a cellular phone to determine a physical location of each of the participants, utilizing an employee of a game producer who is a member of each cohort in the set of cohorts to determine the amount of delay, inserting an artifact in the telecast in which the participants respond to, and establishing the amount of delay through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal, linked to a game server, to provide information related to a precise arrival of an underlying television picture. An average is taken when requiring participants to mark the precise time the predetermined audio or visual event is viewed on the television program. Equalizing the set of cohorts comprises at least one of time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise time of reception of the telecast by the group.

In another aspect, a method of preventing a first set of participants at a live event from having an advantage over a second set of participants watching the live event on television comprises determining a cellular site that serves a set of cellular phones at a venue site, determining the set of cellular phones that are utilizing the cellular site of the venue site, determining a subset of cellular phones within the set of cellular phones that are located within the venue site and generating separate groups of competitions based on the subset of cellular phones within the set of cellular phones that are located within the venue site. A first group within the separate groups of competitions includes only the first set of participants and a second group within the separate groups of competitions includes only the second set of participants. An application on a server determines the cellular site, the set of cellular phones utilizing the cellular site and the subset of cellular phones located within the venue site. An application on each cellular phone within the subset of cellular phones determines if the cellular phone is located within the venue site.

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In another aspect, a method of equalizing effects of latency issues with a taped television broadcast comprises storing a set of data files on a server, determining one or more start times and transmitting the set of files from the server to each mobile device at a transmission time corresponding to an appropriate start time for the mobile device. An application starts using the set of files at the one or more start times. The set of data files are game data files. Determining the one or more start times includes at least one of utilizing an employee of a game provider based on visual observation of a telecast, utilizing at least one of an audio and video recognition system with online access to the broadcast for each separate market which provides real-time tracking of the broadcast to the server, adding at least one of an audio and video event in the television broadcast which is recognizable at a starting point, designating at least one of the audio and video event in the television broadcast which is recognizable as the starting point, utilizing an audio signal, inserted within the broadcast recognizable by an audio receiver of the mobile device, and using a vertical blanking interval.

In yet another aspect, a system for equalizing effects of latency issues for a game of skill comprises a mobile device and a server coupled to the mobile device wherein the server sends a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The mobile device is within a group of mobile devices. The server determines which group the mobile device is in. The server stores game control data and transmits the game control data to the mobile device. The game control data includes delay information for implementing the lockout signal. The server contains a location determination application for determining the location of the mobile device. The mobile device contains a location determination application for determining the location of the mobile device. Variances in delays in receiving the television signal determine delays in transmitting applicable data files within a television signal reception path.

In another aspect, a device for equalizing effects of latency issues for a game of skill comprises a storage device and a set of applications contained within the storage device for sending a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The set of applications determines which group mobile devices coupled to the device are in. The device stores game control data and transfers the game control data to mobile devices. The game control data includes delay information for implementing the lockout signal. The set of applications includes a location application for determining the location of mobile devices. The amount of delay accounts for delays within a television signal reception path.

A network of devices comprises a plurality of mobile devices and a server coupled to the mobile devices wherein the server groups the plurality of mobile devices into a set of cohorts and wherein the server sends a lockout signal at an appropriate time based on an amount of delay to prevent users from submitting a response after they see the outcome. Each cohort within the set of cohorts is based on a signal reception path. The signal reception path is selected from the group consisting of an over the air network, a cable network and a satellite network. The server stores game control data and transfers the game control data to each mobile device within the plurality of mobile devices. The game control data is specific for each cohort within the set of cohorts. The game control data includes delay information for equalizing

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the lockout signal. The amount of delay accounts for delays within a television signal reception path.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODOLOGIES ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

The present invention addresses three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays of a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars. In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their

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television versus another competitor who receives their television signal through a different delivery path. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game is based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the system addressed in the present invention is to ensure the competitors feel they are on equal footing.

The present invention solves the above described issue through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be

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determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. The present invention relies on a variety of methodologies which are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where “lock out” signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as “cohorts.” For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable “head ends” or central broadcast points serving a “cohort.” This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts which are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider. These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers’ television sets.

In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

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Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game “lock out” signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers’ cohort.

Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of “lock out” data relative to the event triggering the “lock out,” based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive “lock out” signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the “lock out” signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step 100, it is determined how each viewer receives a television signal, where possibilities include an over the air broadcast, a particular cable system or a particular satellite system. In the step 102, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant’s house, office, bar or other location from an item such as a DVR. In the step 104, the viewers/participants are grouped into groups also referred to as cohorts. In the step 106, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step 108, the viewers/participants are equalized. The methods of equalization vary, but some examples include time stamping on the game “lock out” signals, imposing a time stamp on the entire data stream so that competitors receiving their television information is slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers’ group.

Arbitrarily Imposed Delays on the Broadcast of the
Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their

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intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, Snap Smart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. The present invention is also able to involve a communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers

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versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced though the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step 200, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step 202, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step 204, it is determined if the cellular phone is located within the venue site. The determination is made by comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step 204, separate groups are generated in the step 206. A group is generated for users that are located at the live venue, and a group is generated for those players that are watching live on television. Therefore, the live players who do not experience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of For-

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tune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

This invention protects a system which first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the

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cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs. In the step 300, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step 302, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining

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start times are possible as well. In the step 304, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention. A server 400 contains applications 402 and a storage mechanism 404. The applications 402 include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server 400 is able to determine which cellular phones are logged into the server 400 and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism 404 is utilized for storing the applications 402 in addition to selections and results. The storage mechanism 404 preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server 400 is part of a network 406. A device 408 couples to the server 400 through the network 406. In some embodiments the network 406 includes the Internet. In some embodiments, the network 406 includes a cellular network. Also, in some embodiments, the network 406 includes both the Internet and a cellular network. The device 408 is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server 400 is possible. The device 408 stores a variety of applications 410. A game application is stored on the device 408. In some embodiments, software to identify the physical location of the device 408 is stored on the device 408. The device 408 also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device 408 receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server 400 and on the device 408, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention. A server 400 is coupled to many devices through a network 406. The devices are grouped into groups or cohorts as described above. For example, Group 1 of devices 500 includes a set of devices that receive a television signal through cable with a delay time of x. Group 2 of devices 502 includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices 504 includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television

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signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

To utilize the present invention, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the present invention. The user simply plays as usual except that with the present invention, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, implementing the present invention is able to be automated or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the present invention is able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the present invention ensures that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually

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attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of implementing a game of skill or chance or other entertainment comprising:

determining a geographic location of a device;
providing streaming content based on the geographic location of the device;

providing the game of skill or chance or other entertainment with the streaming content, wherein the game of skill or chance or other entertainment involves users making selections utilizing the game of skill or chance or other entertainment, wherein the selections are related to events that occur within the streaming content, and further wherein the game of skill or chance or other entertainment is related to the streaming content; and

triggering a lockout signal, utilizing a person attending the events related to the streaming content, to prevent the users from submitting a response to the game of skill or chance or other entertainment.

2. The method of claim 1 wherein the streaming content comprises an online broadcast.

3. The method of claim 1 wherein the streaming content comprises an esports competition.

4. The method of claim 1 wherein the streaming content comprises a trivia contest.

5. The method of claim 1 wherein the streaming content comprises a sporting competition.

6. The method of claim 1 wherein the streaming content comprises a television commercial.

7. The method of claim 1 wherein the streaming content comprises prerecorded television programming.

8. The method of claim 1 wherein the streaming content comprises an audio and/or video track utilized to synchronize the game of skill or chance or other entertainment.

9. The method of claim 1 further comprising determining a start time of the streaming content using a recognizable signal included within the streaming content.

10. The method of claim 1 wherein existing events in the streaming content are used as synchronization points for data files stored on the device.

11. The method of claim 1 wherein information is embedded in the streaming content and utilized to track the streaming content in real-time.

12. The method of claim 1 wherein a plurality of synchronization points are used to continuously ensure the game of skill or chance or other entertainment is synchronized with the streaming content.

13. The method of claim 1 further comprising determining an amount of delay for participants in separate cohorts participating in the game of skill or chance or other entertainment.

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14. The method of claim 1 further comprising equalizing receipt of the game of skill or chance or other entertainment and the streaming content regardless of the geographic location of the device including delaying the receipt of the game of skill or chance or other entertainment by an amount and preventing entry of a selection after a result is known.

15. The method of claim 1 wherein determining the geographic location comprises utilizing automatic content recognition.

16. The method of claim 1 wherein determining the geographic location comprises utilizing an Internet connection to determine the geographic location of a smart television set.

17. The method of claim 1 wherein determining the geographic location is performed by a server.

18. The method of claim 1 wherein determining the geographic location comprises utilizing a cellular network to determine the geographic location.

19. The method of claim 1 wherein the users are grouped based on skill level.

20. A method of implementing a game of skill or chance or other entertainment comprising:

determining a geographic location of each device of a set of devices;

providing a content stream to each device based on the geographic location;

providing the game of skill or chance or other entertainment with the content stream, wherein the game of skill or chance or other entertainment involves users making selections related to events that occur within the content stream;

preventing entry of a selection in the game of skill or chance or other entertainment after a result is known by sending a lockout signal, utilizing a person attending the events related to the streaming content, to prevent the users from submitting a response to the game of skill or chance or other entertainment; and

delivering the content stream and synchronized game data to each device of the set of devices.

21. The method of claim 20 wherein the content stream comprises an online broadcast.

22. The method of claim 20 wherein the content stream comprises an esports competition.

23. The method of claim 20 wherein the content stream comprises a sporting competition.

24. The method of claim 20 wherein the streaming content comprises a television commercial.

25. The method of claim 20 wherein the streaming content comprises prerecorded television programming.

26. The method of claim 20 wherein synchronizing and delivering are performed by a server device.

27. The method of claim 20 wherein the content stream comprises one or more separate contest streams.

28. The method of claim 27 wherein the one or more separate contest streams each relate to different broadcast athletic events accessible within a single application.

29. The method of claim 20 wherein determining the geographic location comprises utilizing automatic content recognition.

30. The method of claim 20 wherein determining the geographic location comprises utilizing an Internet connection to determine the geographic location of a smart television set.

31. The method of claim 20 wherein determining the geographic location is performed by a server.

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32. The method of claim 20 wherein determining the geographic location comprises utilizing a cellular network to determine the geographic location.

33. The method of claim 20 further comprising determining a time to send the lockout signal based on a nature of the events.

34. The method of claim 33 wherein the nature of the events is based on the content stream.

35. A method of implementing a game of skill or chance or other entertainment comprising:

determining a geographic location of a device;

receiving streaming content based on the geographic location of the device;

providing the game of skill or chance or other entertainment with the streaming content, wherein the game of skill or chance or other entertainment involves users making selections utilizing the game of skill or chance or other entertainment, wherein the selections are related to events that occur within the streaming content, and further wherein the game of skill or chance or other entertainment is related to the streaming content; triggering a lockout signal, utilizing a person attending the events related to the streaming content, to prevent the users from submitting a response to the game of skill or chance or other entertainment; and presenting the streaming content and the game of skill or chance or other entertainment on the device.

36. The method of claim 35 wherein the streaming content comprises an online broadcast.

37. The method of claim 35 wherein the streaming content comprises an esports competition.

38. The method of claim 35 wherein the streaming content comprises a sporting competition.

39. The method of claim 35 wherein the streaming content comprises a television commercial.

40. The method of claim 35 wherein the streaming content comprises prerecorded television programming.

41. The method of claim 35 wherein the game of skill or chance or other entertainment and the streaming content are presented using an application.

42. The method of claim 41 wherein the application is a single application that displays the game of skill or chance or other entertainment and the streaming content within the single application.

43. The method of claim 35 wherein determining the geographic location comprises utilizing automatic content recognition.

44. The method of claim 35 wherein determining the geographic location comprises utilizing an Internet connection to determine the geographic location of a smart television set.

45. The method of claim 35 wherein determining the geographic location is performed by a server.

46. The method of claim 35 wherein determining the geographic location comprises utilizing a cellular network to determine the geographic location.

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47. A method of implementing a game of skill or chance or other entertainment comprising:

determining a geographic location of each device of a set of devices;

determining a service provider for each participant of the game of skill or chance or other entertainment;

receiving a content stream based on the geographic location of each device;

providing the game of skill or chance or other entertainment with the content stream, wherein the game of skill or chance or other entertainment involves users making selections utilizing the game of skill or chance or other entertainment, wherein the selections are related to events that occur within the streaming content, and further wherein the game of skill or chance or other entertainment is related to the streaming content;

sending a lockout signal, utilizing a person attending a physical location where the events related to the streaming content take place, to prevent the users from submitting a response to the game of skill or chance or other entertainment; and

delivering the content stream and synchronized game data to each device of the set of devices.

48. The method of claim 47 wherein determining the service provider is performed by a server device.

49. The method of claim 47 wherein determining the service provider is performed by a client device.

50. The method of claim 47 wherein the content stream and the synchronized game data of the game of skill or chance or other entertainment are presented on a same screen.

51. The method of claim 47 wherein the content stream comprises an esports competition.

52. The method of claim 47 wherein the content stream comprises a sporting competition.

53. The method of claim 47 wherein the streaming content comprises a television commercial.

54. The method of claim 47 wherein the streaming content comprises prerecorded television programming.

55. The method of claim 47 wherein determining the geographic location comprises utilizing automatic content recognition.

56. The method of claim 47 wherein determining the geographic location comprises utilizing an Internet connection to determine the geographic location of a smart television set.

57. The method of claim 47 wherein determining the geographic location is performed by a server.

58. The method of claim 47 wherein determining the geographic location comprises utilizing a cellular network to determine the geographic location.

59. The method of claim 47 further comprising determining a time to send the lockout signal based on a nature of the events.

60. The method of claim 59 wherein the nature of the events is based on the content stream.

* * * * *

Exhibit 2



US011235237B2

(12) **United States Patent**
Lockton et al.

(10) **Patent No.:** **US 11,235,237 B2**
(45) **Date of Patent:** ***Feb. 1, 2022**

(54) **METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING**

(58) **Field of Classification Search**
CPC A63F 13/50
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.
(Continued)

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(Continued)

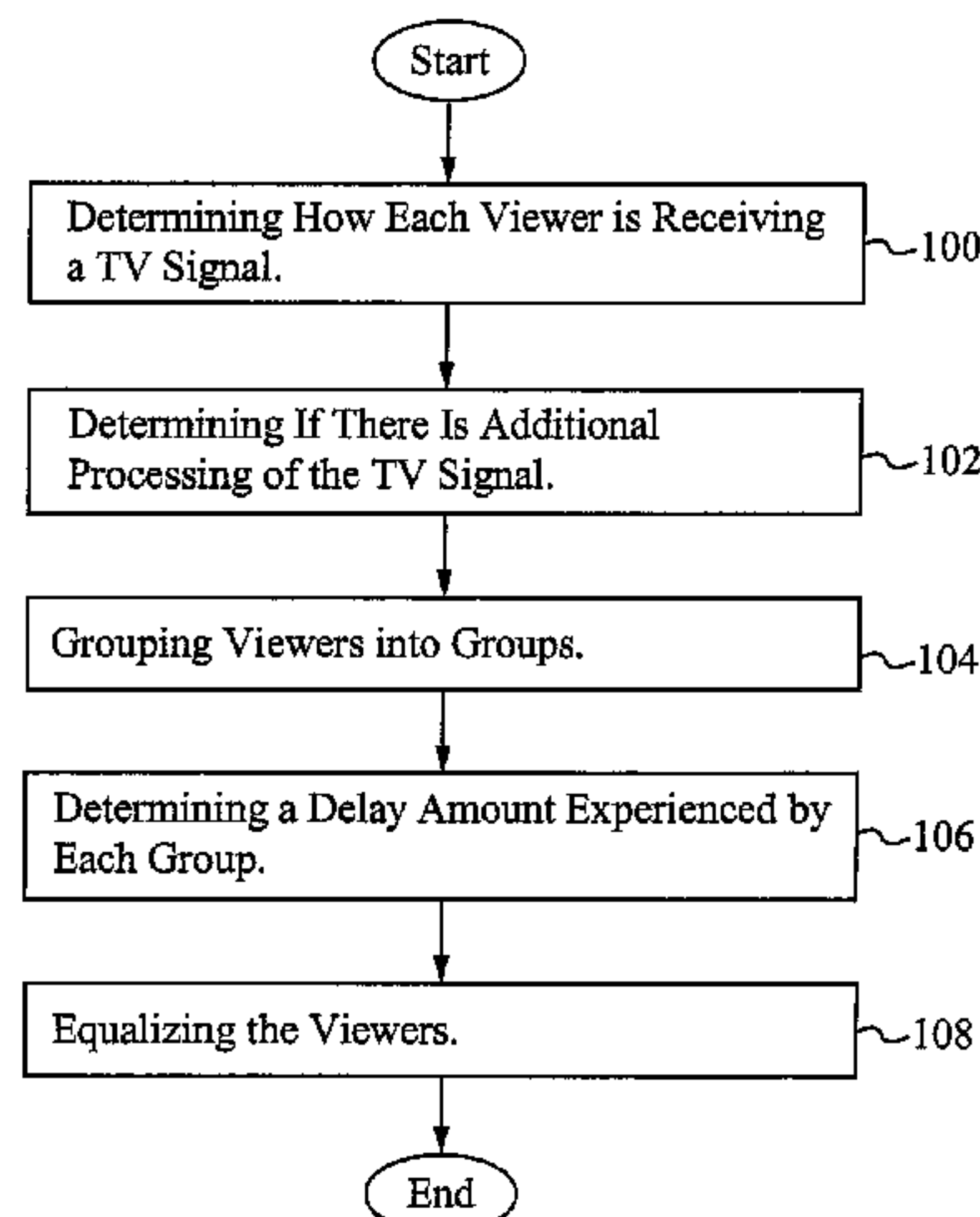
(51) **Int. Cl.**
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(Continued)

(52) **U.S. Cl.**
CPC **A63F 13/358** (2014.09); **A63F 13/216** (2014.09); **A63F 13/22** (2014.09);
(Continued)

(57) **ABSTRACT**

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

119 Claims, 5 Drawing Sheets



US 11,235,237 B2

Page 2

Related U.S. Application Data		4,386,377 A	5/1983	Hunter, Jr.	
continuation of application No. 15/900,438, filed on		4,496,148 A	1/1985	Morstain et al.	
Feb. 20, 2018, now Pat. No. 10,150,031, which is a		4,521,803 A	6/1985	Glitteringer	
continuation of application No. 15/648,101, filed on		4,592,546 A *	6/1986	Fascenda	A63F 3/064 463/29
Jul. 12, 2017, now Pat. No. 9,919,211, which is a		4,816,904 A	3/1989	McKenna et al.	
continuation of application No. 15/263,186, filed on		4,918,603 A	4/1990	Hughes et al.	
Sep. 12, 2016, now Pat. No. 9,744,453, which is a		4,930,010 A	5/1990	MacDonald	
division of application No. 14/172,571, filed on Feb.		5,013,038 A	5/1991	Luvenberg	
4, 2014, now Pat. No. 9,604,140, which is a contin-		5,018,736 A	5/1991	Pearson et al.	
uation of application No. 13/681,172, filed on Nov.		5,035,422 A	7/1991	Berman	
19, 2012, now Pat. No. 8,699,168, which is a division		5,073,931 A	12/1991	Audebert et al.	
of application No. 13/403,845, filed on Feb. 23, 2012,		5,083,271 A	1/1992	Thatcher et al.	
now Pat. No. 8,717,701, which is a continuation of		5,083,800 A	1/1992	Lockton	
application No. 11/786,992, filed on Apr. 12, 2007,		5,119,295 A	6/1992	Kapur	
now Pat. No. 8,149,530.		5,120,076 A	6/1992	Luxenberg et al.	
		5,213,337 A	5/1993	Sherman	
		5,227,874 A	7/1993	Von Kohom	
		5,256,863 A	10/1993	Ferguson	
		5,263,723 A	11/1993	Pearson et al.	
(60) Provisional application No. 60/791,793, filed on Apr.		5,283,734 A	2/1994	Von Kohom	
12, 2006.		5,327,485 A	7/1994	Leaden	
		5,343,236 A	8/1994	Koppe et al.	
(51) Int. Cl.		5,343,239 A	8/1994	Lappington et al.	
<i>A63F 13/332</i> (2014.01)		5,417,424 A	5/1995	Snowden	
<i>A63F 13/216</i> (2014.01)		5,462,275 A	10/1995	Lowe et al.	
<i>A63F 13/795</i> (2014.01)		5,479,492 A	12/1995	Hofstee et al.	
<i>A63F 13/338</i> (2014.01)		5,488,659 A	1/1996	Millani	
<i>H04N 21/472</i> (2011.01)		5,519,433 A	5/1996	Lappington	
<i>H04N 21/61</i> (2011.01)		5,530,483 A	6/1996	Cooper	
<i>H04N 5/04</i> (2006.01)		5,553,120 A	9/1996	Katz	
<i>H04N 21/436</i> (2011.01)		5,566,291 A	10/1996	Boulton et al.	
<i>H04N 21/27</i> (2011.01)		5,585,975 A	12/1996	Bliss	
<i>H04N 21/43</i> (2011.01)		5,586,257 A	12/1996	Perlman	
<i>H04N 21/435</i> (2011.01)		5,589,765 A	12/1996	Ohmart et al.	
<i>H04N 21/478</i> (2011.01)		5,594,938 A	1/1997	Engel	
<i>A63F 13/22</i> (2014.01)		5,618,232 A	4/1997	Martin	
<i>A63F 13/92</i> (2014.01)		5,628,684 A	5/1997	Jean-Etienne	
<i>H04N 21/2385</i> (2011.01)		5,636,920 A	6/1997	Shur et al.	
<i>H04N 21/258</i> (2011.01)		5,638,113 A	6/1997	Lappington	
<i>H04N 21/442</i> (2011.01)		5,643,088 A	7/1997	Vaughn et al.	
<i>H04N 21/45</i> (2011.01)		5,663,757 A	9/1997	Morales	
<i>A63F 13/32</i> (2014.01)		5,759,101 A	6/1998	Won Kohom	
<i>A63F 13/285</i> (2014.01)		5,761,606 A	6/1998	Wolzien	
<i>A63F 13/50</i> (2014.01)		5,762,552 A	6/1998	Voung et al.	
<i>H04N 21/24</i> (2011.01)		5,764,275 A	6/1998	Lappington et al.	
		5,794,210 A	8/1998	Goldhaber et al.	
		5,805,230 A	9/1998	Staron	
		5,813,913 A *	9/1998	Berner	A63F 13/10 463/40
		5,818,438 A	10/1998	Howe et al.	
(52) U.S. Cl.		5,828,843 A	10/1998	Grimm	
CPC		5,838,774 A	11/1998	Weiser, Jr.	
<i>A63F 13/285</i> (2014.09); <i>A63F 13/32</i>		5,838,909 A	11/1998	Roy	
(2014.09); <i>A63F 13/332</i> (2014.09); <i>A63F</i>		5,846,132 A	12/1998	Junkin	
<i>13/335</i> (2014.09); <i>A63F 13/338</i> (2014.09);		5,848,397 A	12/1998	Marsh et al.	
<i>A63F 13/50</i> (2014.09); <i>A63F 13/795</i>		5,860,862 A	1/1999	Junkin	
(2014.09); <i>A63F 13/92</i> (2014.09); <i>H04N 5/04</i>		5,894,556 A	4/1999	Grimm	
(2013.01); <i>H04N 21/2385</i> (2013.01); <i>H04N</i>		5,916,024 A	6/1999	Von Kohom	
<i>21/24</i> (2013.01); <i>H04N 21/25866</i> (2013.01);		5,870,683 A	9/1999	Wells et al.	
<i>H04N 21/27</i> (2013.01); <i>H04N 21/4302</i>		5,970,143 A	10/1999	Schneier et al.	
(2013.01); <i>H04N 21/435</i> (2013.01); <i>H04N</i>		5,971,854 A	10/1999	Pearson et al.	
<i>21/43615</i> (2013.01); <i>H04N 21/44209</i>		5,987,440 A	11/1999	O’Neil et al.	
(2013.01); <i>H04N 21/4508</i> (2013.01); <i>H04N</i>		6,009,458 A	12/1999	Hawkins et al.	
<i>21/4781</i> (2013.01); <i>H04N 21/47217</i> (2013.01);		6,015,344 A	1/2000	Kelly et al.	
<i>H04N 21/6131</i> (2013.01); <i>A63F 2300/406</i>		6,016,337 A	1/2000	Pykalisto	
(2013.01); <i>A63F 2300/407</i> (2013.01); <i>A63F</i>		6,038,599 A	3/2000	Black	
<i>2300/409</i> (2013.01); <i>A63F 2300/534</i> (2013.01)		6,042,477 A	3/2000	Addink	
		6,064,449 A	5/2000	White	
		6,104,815 A	8/2000	Alcorn et al.	
		6,110,041 A	8/2000	Walker et al.	
		6,117,013 A	9/2000	Elba	
(56) References Cited		6,126,543 A	10/2000	Friedman	
U.S. PATENT DOCUMENTS		6,128,660 A	10/2000	Grimm	
4,141,548 A *		6,135,881 A	10/2000	Abbott et al.	
2/1979		6,174,237 B1	1/2001	Stephenson	
Everton		6,182,084 B1	1/2001	Cockrell et al.	
A63F 7/06		6,193,610 B1	2/2001	Junkin	
463/36		6,222,642 B1	4/2001	Farrell et al.	
4,270,755 A					
6/1981					
Willhide et al.					

US 11,235,237 B2

Page 3

(56)

References Cited

U.S. PATENT DOCUMENTS

6,233,736 B1	5/2001	Wolzien	7,035,626 B1	4/2006	Luciano, Jr.
6,251,017 B1	6/2001	Leason et al.	7,035,653 B2	4/2006	Simon et al.
6,263,447 B1	7/2001	French	7,058,592 B1	6/2006	Heckerman et al.
6,267,670 B1	7/2001	Walker	7,076,434 B1	7/2006	Newman et al.
6,287,199 B1	9/2001	McKeown et al.	7,085,552 B2	8/2006	Buckley
6,293,868 B1	9/2001	Bernard	7,116,310 B1	10/2006	Evans et al.
6,312,336 B1	11/2001	Handelman et al.	7,117,517 B1	10/2006	Milazzo et al.
6,343,320 B1	1/2002	Fairchild	7,120,924 B1	10/2006	Katcher et al.
6,345,297 B1	2/2002	Grimm	7,124,410 B2	10/2006	Berg
6,371,855 B1	4/2002	Gavriloff	7,125,336 B2	10/2006	Anttila et al.
6,373,462 B1	4/2002	Pan	7,136,871 B2	11/2006	Ozer et al.
6,411,969 B1	6/2002	Tam	7,144,011 B2	12/2006	Asher et al.
6,416,414 B1	7/2002	Stadelmann	7,169,050 B1	1/2007	Tyler
6,418,298 B1	7/2002	Sonnenfeld	7,187,658 B2	3/2007	Koyanagi
6,425,828 B2	7/2002	Walker et al.	7,191,447 B1	3/2007	Ellis et al.
6,434,398 B1	8/2002	Inselberg	7,192,352 B2	3/2007	Walker et al.
6,446,262 B1	9/2002	Malaure et al.	7,194,758 B1	3/2007	Waki et al.
6,470,180 B1	10/2002	Kotzin et al.	7,228,349 B2	6/2007	Barone, Jr. et al.
6,475,090 B2	11/2002	Gregory	7,231,630 B2	6/2007	Acott et al.
6,524,189 B1	2/2003	Rautila	7,233,922 B2	6/2007	Asher et al.
6,527,641 B1	3/2003	Sinclair et al.	7,240,093 B1	7/2007	Danieli et al.
6,530,082 B1	3/2003	Del Sesto et al.	7,244,181 B2	7/2007	Wang et al.
6,536,037 B1	3/2003	Guheen et al.	7,249,367 B2	7/2007	Bove, Jr. et al.
6,578,068 B1	6/2003	Bowma-Amuah	7,254,605 B1	8/2007	Strum
6,594,098 B1	7/2003	Sutardja	7,260,782 B2	8/2007	Wallace et al.
6,604,997 B2	7/2003	Saidakovsky et al.	RE39,818 E	9/2007	Slifer
6,610,953 B1	8/2003	Tao et al.	7,283,830 B2	10/2007	Buckley
6,648,760 B1	11/2003	Nicastro	7,288,027 B2	10/2007	Overton
6,659,860 B1	12/2003	Yamamoto et al.	7,341,517 B2	3/2008	Asher et al.
6,659,861 B1	12/2003	Faris	7,343,617 B1	3/2008	Kartcher et al.
6,659,872 B1	12/2003	Kaufman et al.	7,347,781 B2	3/2008	Schultz
6,690,661 B1	2/2004	Agarwal et al.	7,351,149 B1	4/2008	Simon et al.
6,697,869 B1	2/2004	Mallart	7,367,042 B1	4/2008	Dakss et al.
6,718,350 B1	4/2004	Karbowski	7,379,705 B1	5/2008	Rados et al.
6,752,396 B2	6/2004	Smith	7,389,144 B1	6/2008	Osorio
6,758,754 B1	7/2004	Lavanchy et al.	7,430,718 B2	9/2008	Gariepy-Viles
6,758,755 B2	7/2004	Kelly et al.	7,452,273 B2	11/2008	Amaitis et al.
6,760,595 B2	7/2004	Insellberg	7,460,037 B2	12/2008	Cattone et al.
6,763,377 B1	7/2004	Balknap et al.	7,461,067 B2	12/2008	Dewing et al.
6,766,524 B1	7/2004	Matheny et al.	7,502,610 B2	3/2009	Maher
6,774,926 B1	8/2004	Ellis et al.	7,510,474 B2	3/2009	Carter, Sr.
6,785,561 B1	8/2004	Kim	7,517,282 B1	4/2009	Pryor
6,801,380 B1	10/2004	Saturdja	7,534,169 B2	5/2009	Amaitis et al.
6,806,889 B1	10/2004	Malaure et al.	7,543,052 B1	6/2009	Cesa Klein
6,807,675 B1	10/2004	Millard et al.	7,562,134 B1	7/2009	Fingerhut et al.
6,811,482 B2	11/2004	Letovsky	7,602,808 B2	10/2009	Ullmann
6,811,487 B2	11/2004	Sengoku	7,610,330 B1	10/2009	Quinn
6,816,628 B1	11/2004	Sarachik et al.	7,614,944 B1	11/2009	Hughes et al.
6,817,947 B2	11/2004	Tanskanen	7,630,986 B1	12/2009	Herz et al.
6,824,469 B2	11/2004	Allibhoy et al.	7,693,781 B2	4/2010	Asher et al.
6,837,789 B2	1/2005	Garahi et al.	7,699,707 B2	4/2010	Bahou
6,837,791 B1	1/2005	McNutt et al.	7,702,723 B2	4/2010	Dyl
6,840,861 B2	1/2005	Jordan et al.	7,711,628 B2	5/2010	Davie et al.
6,845,389 B1	1/2005	Sen	7,729,286 B2	6/2010	Mishra
6,846,239 B2	1/2005	Washio	7,753,772 B1	7/2010	Walker
6,857,122 B1	2/2005	Takeda et al.	7,753,789 B2	7/2010	Walker et al.
6,863,610 B2	3/2005	Vancraeynest	7,780,528 B2	8/2010	Hirayama
6,870,720 B2	3/2005	Iwata et al.	7,828,661 B1	11/2010	Fish
6,871,226 B1	3/2005	Ensley et al.	7,835,961 B2	11/2010	Davie et al.
6,873,610 B1	3/2005	Noever	7,860,993 B2	12/2010	Chintala
6,884,166 B2	4/2005	Leen et al.	7,886,003 B2	2/2011	Newman
6,884,172 B1	4/2005	Lloyd et al.	7,907,211 B2	3/2011	Oostveen et al.
6,887,159 B2	5/2005	Leen et al.	7,907,598 B2	3/2011	Anisimov
6,888,929 B1	5/2005	Saylor	7,925,756 B1	4/2011	Riddle
6,893,347 B1	5/2005	Zilliacus et al.	7,926,810 B2	4/2011	Fisher et al.
6,898,762 B2	5/2005	Ellis et al.	7,937,318 B2	5/2011	Davie et al.
6,899,628 B2	5/2005	Leen et al.	7,941,482 B2	5/2011	Bates
6,903,681 B2	6/2005	Faris	7,941,804 B1	5/2011	Herington
6,908,389 B1	6/2005	Puskala	7,976,389 B2	7/2011	Cannon et al.
6,942,574 B1	9/2005	LeMay et al.	8,002,618 B1	8/2011	Lockton et al.
6,944,228 B1	9/2005	Dakss et al.	8,006,314 B2	8/2011	Wold
6,960,088 B1	11/2005	Long	8,025,565 B2	9/2011	Leen et al.
6,978,053 B1	12/2005	Sarachik et al.	8,028,315 B1	9/2011	Barber
7,001,279 B1	2/2006	Barber et al.	8,082,150 B2	12/2011	Wold
7,029,394 B2	4/2006	Leen et al.	8,086,445 B2	12/2011	Wold et al.
			8,086,510 B2	12/2011	Amaitis et al.
			8,092,303 B2	1/2012	Amaitis et al.
			8,105,141 B2	1/2012	Leen et al.
			8,107,674 B2	1/2012	Davis et al.

US 11,235,237 B2

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(56)

References Cited

U.S. PATENT DOCUMENTS

8,109,827	B2	2/2012	Cahill et al.
8,128,474	B2	3/2012	Amaitis et al.
8,147,313	B2	4/2012	Amaitis et al.
8,147,373	B2	4/2012	Amaitis et al.
8,149,530	B1	4/2012	Lockton et al.
8,155,637	B2	4/2012	Fujisawa
8,162,759	B2	4/2012	Yamaguchi
8,176,518	B1	5/2012	Junkin et al.
8,186,682	B2	5/2012	Amaitis et al.
8,204,808	B2	6/2012	Amaitis et al.
8,219,617	B2	7/2012	Ashida
8,240,669	B2	8/2012	Asher et al.
8,246,048	B2	8/2012	Amaitis et al.
8,267,403	B2	9/2012	Fisher et al.
8,342,924	B2	1/2013	Leen et al.
8,342,942	B2	1/2013	Amaitis et al.
8,353,763	B2 *	1/2013	Amaitis G07F 17/3288 463/28
8,376,855	B2	2/2013	Lockton et al.
8,396,001	B2 *	3/2013	Jung H04W 4/021 370/252
8,397,257	B1	3/2013	Barber
8,465,021	B2	6/2013	Asher et al.
8,473,393	B2	6/2013	Davie et al.
8,474,819	B2	7/2013	Asher et al.
8,535,138	B2	9/2013	Amaitis et al.
8,538,563	B1	9/2013	Barber
8,543,487	B2	9/2013	Asher et al.
8,555,313	B2	10/2013	Newman
8,556,691	B2	10/2013	Leen et al.
8,585,490	B2	11/2013	Amaitis et al.
8,622,798	B2	1/2014	Lockton et al.
8,632,392	B2	1/2014	Shore et al.
8,638,517	B2	1/2014	Lockton et al.
8,641,511	B2	2/2014	Ginsberg et al.
8,659,848	B2	2/2014	Lockton et al.
8,672,751	B2	3/2014	Leen et al.
8,699,168	B2	4/2014	Lockton et al.
8,705,195	B2	4/2014	Lockton
8,708,789	B2	4/2014	Asher et al.
8,717,701	B2	5/2014	Lockton et al.
8,727,352	B2	5/2014	Amaitis et al.
8,734,227	B2	5/2014	Leen et al.
8,737,004	B2	5/2014	Lockton et al.
8,738,694	B2	5/2014	Huske et al.
8,771,058	B2	7/2014	Alderucci et al.
8,780,482	B2	7/2014	Lockton et al.
8,805,732	B2	8/2014	Davie et al.
8,813,112	B1	8/2014	Cibula et al.
8,814,664	B2	8/2014	Amaitis et al.
8,817,408	B2	8/2014	Lockton et al.
8,837,072	B2	9/2014	Lockton et al.
8,849,225	B1	9/2014	Choti
8,849,255	B2	9/2014	Choti
8,858,313	B1	10/2014	Selfors
8,870,639	B2	10/2014	Lockton et al.
8,935,715	B2	1/2015	Cibula et al.
9,056,251	B2	6/2015	Lockton
9,067,143	B2	6/2015	Lockton et al.
9,069,651	B2	6/2015	Barber
9,076,303	B1	7/2015	Park
9,098,883	B2	8/2015	Asher et al.
9,111,417	B2	8/2015	Leen et al.
9,205,339	B2	12/2015	Cibula et al.
9,233,293	B2	1/2016	Lockton
9,258,601	B2	2/2016	Lockton et al.
9,270,789	B2	2/2016	Huske et al.
9,289,692	B2	3/2016	Barber
9,306,952	B2	4/2016	Burman et al.
9,314,686	B2	4/2016	Lockton
9,314,701	B2	4/2016	Lockton et al.
9,355,518	B2	5/2016	Amaitis et al.
9,406,189	B2	8/2016	Scott et al.
9,430,901	B2	8/2016	Amaitis et al.
9,457,272	B2	10/2016	Lockton et al.

9,498,724	B2	11/2016	Lockton et al.
9,501,904	B2	11/2016	Lockton
9,504,922	B2	11/2016	Lockton et al.
9,511,287	B2	12/2016	Lockton et al.
9,526,991	B2	12/2016	Lockton et al.
9,536,396	B2	1/2017	Amaitis et al.
9,556,991	B2	1/2017	Furuya
9,604,140	B2	3/2017	Lockton et al.
9,652,937	B2	5/2017	Lockton
9,662,576	B2	5/2017	Lockton et al.
9,662,577	B2	5/2017	Lockton et al.
9,672,692	B2	6/2017	Lockton
9,687,738	B2	6/2017	Lockton et al.
9,687,739	B2	6/2017	Lockton et al.
9,707,482	B2	7/2017	Lockton et al.
9,716,918	B1	7/2017	Lockton et al.
9,724,603	B2	8/2017	Lockton et al.
9,744,453	B2	8/2017	Lockton et al.
9,805,549	B2	10/2017	Asher et al.
9,821,233	B2	11/2017	Lockton et al.
9,878,243	B2	1/2018	Lockton et al.
9,881,337	B2	1/2018	Jaycob et al.
9,901,820	B2	2/2018	Lockton et al.
9,908,053	B2	3/2018	Lockton et al.
9,919,210	B2	3/2018	Lockton
9,919,211	B2	3/2018	Lockton et al.
9,919,221	B2	3/2018	Lockton et al.
9,978,217	B2	5/2018	Lockton
9,993,730	B2	6/2018	Lockton et al.
9,999,834	B2	6/2018	Lockton et al.
10,052,557	B2	8/2018	Lockton et al.
10,089,815	B2	10/2018	Asher et al.
10,096,210	B2	10/2018	Amaitis et al.
10,137,369	B2	11/2018	Lockton et al.
10,150,031	B2	12/2018	Lockton et al.
10,165,339	B2	12/2018	Huske et al.
10,186,116	B2	1/2019	Lockton
10,195,526	B2	2/2019	Lockton et al.
10,226,698	B1	3/2019	Lockton et al.
10,226,705	B2	3/2019	Lockton et al.
10,232,270	B2	3/2019	Lockton et al.
10,248,290	B2	4/2019	Galfond
10,279,253	B2	5/2019	Lockton
10,653,955	B2	5/2020	Lockton
10,695,672	B2	6/2020	Lockton et al.
10,709,987	B2	7/2020	Lockton et al.
10,721,543	B2	7/2020	Huske et al.
2001/0004609	A1	6/2001	Walker et al.
2001/0005670	A1	6/2001	Lahtinen
2001/0013067	A1	8/2001	Koyanagi
2001/0013125	A1	8/2001	Kitsukawa et al.
2001/0020298	A1	9/2001	Rector, Jr. et al.
2001/0032333	A1	10/2001	Flickinger
2001/0036272	A1	11/2001	Hirayama
2001/0036853	A1	11/2001	Thomas
2001/0044339	A1	11/2001	Cordero
2001/0054019	A1	12/2001	de Fabrega
2002/0010789	A1	1/2002	Lord
2002/0018477	A1	2/2002	Katz
2002/0026321	A1	2/2002	Faris
2002/0029381	A1	3/2002	Inselberg
2002/0035609	A1	3/2002	Lessard
2002/0037766	A1	3/2002	Muniz
2002/0069265	A1	3/2002	Bountour
2002/0042293	A1	4/2002	Ubale et al.
2002/0046099	A1	4/2002	Frengut et al.
2002/0054088	A1	5/2002	Tanskanen et al.
2002/0055385	A1	5/2002	Otsu
2002/0056089	A1	5/2002	Houston
2002/0059094	A1	5/2002	Hosea et al.
2002/0059623	A1	5/2002	Rodriguez et al.
2002/0069076	A1	6/2002	Faris
2002/0076084	A1	6/2002	Tian
2002/0078176	A1	6/2002	Nomura et al.
2002/0083461	A1	6/2002	Hutcheson
2002/0091833	A1	7/2002	Grimm
2002/0095333	A1	7/2002	Jokinen et al.
2002/0097983	A1	7/2002	Wallace et al.
2002/0099709	A1	7/2002	Wallace

2004/0139482	A1	7/2004	Hale	
2004/0148638	A1	7/2004	Weisman et al.	
2004/0152517	A1	8/2004	Haedisty	
2004/0152519	A1	8/2004	Wang	
2004/0158855	A1	8/2004	Gu et al.	
2004/0162124	A1	8/2004	Barton et al.	
2004/0166873	A1	8/2004	Simic	
2004/0176162	A1	9/2004	Rothschild	
2004/0178923	A1	9/2004	Kuang	
2004/0183824	A1	9/2004	Benson	
2004/0185881	A1	9/2004	Lee	
2004/0190779	A1	9/2004	Sarachik et al.	
2004/0198495	A1	10/2004	Cisneros et al.	
2004/0201626	A1	10/2004	Lavoie	
2004/0203667	A1	10/2004	Shroder	
2004/0203898	A1	10/2004	Bodin et al.	
2004/0210507	A1	10/2004	Asher et al.	
2004/0215756	A1	10/2004	VanAntwerp	
2004/0216161	A1	10/2004	Barone, Jr. et al.	
2004/0216171	A1	10/2004	Barone, Jr. et al.	
2004/0224750	A1	11/2004	Ai-Ziyoud	
2004/0242321	A1	12/2004	Overton	
2004/0266513	A1	12/2004	Odom	
2005/0005303	A1	1/2005	Barone, Jr. et al.	
2005/0021942	A1	1/2005	Diehl et al.	
2005/0026699	A1	2/2005	Kinzer et al.	
2005/0028208	A1	2/2005	Ellis	
2005/0043094	A1	2/2005	Nguyen et al.	
2005/0076371	A1	4/2005	Nakamura	
2005/0077997	A1	4/2005	Landram	
2005/0060219	A1	5/2005	Ditering et al.	
2005/0097599	A1	5/2005	Potnick et al.	
2005/0101309	A1	5/2005	Croome	
2005/0113164	A1	5/2005	Buecheler et al.	
2005/0003878	A1	6/2005	Updike	
2005/0131984	A1	6/2005	Hofmann et al.	
2005/0138668	A1	6/2005	Gray et al.	
2005/0144102	A1	6/2005	Johnson	
2005/0155083	A1	7/2005	Oh	
2005/0177861	A1	8/2005	Ma et al.	
2005/0210526	A1	9/2005	Levy et al.	
2005/0216838	A1	9/2005	Graham	
2005/0235043	A1	10/2005	Teodosiu et al.	
2005/0239551	A1	10/2005	Griswold	
2005/0255901	A1	11/2005	Kreutzer	
2005/0256895	A1	11/2005	Dussault	
2005/0266869	A1	12/2005	Jung	
2005/0267969	A1	12/2005	Poikselka et al.	
2005/0273804	A1	12/2005	Preisman	
2005/0283800	A1	12/2005	Ellis et al.	
2005/0288080	A1	12/2005	Lockton et al.	
2005/0288101	A1	12/2005	Lockton et al.	
2005/0288812	A1	12/2005	Cheng	
2006/0020700	A1	1/2006	Qiu	
2006/0025070	A1	2/2006	Kim et al.	
2006/0046810	A1	3/2006	Tabata	
2006/0047772	A1	3/2006	Crutcher	
2006/0053390	A1	3/2006	Gariepy-Viles	
2006/0058103	A1	3/2006	Danieli	
2006/0059161	A1	3/2006	Millett et al.	
2006/0063590	A1	3/2006	Abassi et al.	
2006/0082068	A1	4/2006	Patchen	
2006/0087585	A1	4/2006	Seo	
2006/0089199	A1	4/2006	Jordan et al.	
2006/0094409	A1 *	5/2006	Inselberg	G06Q 30/02 455/414.1
2006/0111168	A1	5/2006	Nguyen	
2006/0135253	A1	6/2006	George et al.	
2006/0148569	A1	7/2006	Beck	
2006/0156371	A1	7/2006	Maetz et al.	
2006/0174307	A1	8/2006	Hwang et al.	
2006/0183547	A1	8/2006	Mc Monigle	
2006/0183548	A1	8/2006	Morris et al.	
2006/0190654	A1	8/2006	Joy	
2006/0205483	A1	9/2006	Meyer et al.	
2006/0205509	A1	9/2006	Hirota	
2006/0205510	A1	9/2006	Lauper	
2006/0217198	A1	9/2006	Johnson	
2006/0236352	A1	10/2006	Scott, III	

US 11,235,237 B2

(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0248553 A1

2006/0248564 A1

2006/0256865 A1

2006/0256868 A1

2006/0269120 A1

2006/0285586 A1

2007/0004516 A1

2007/0013547 A1

2007/0019826 A1

2007/0028272 A1

2007/0037623 A1

2007/0054695 A1

2007/0078009 A1

2007/0083920 A1

2007/0086465 A1

2007/0087832 A1

2007/0093296 A1

2007/0101358 A1

2007/0106721 A1

2007/0107010 A1

2007/0129144 A1

2007/0147870 A1

2007/0162328 A1

2007/0183744 A1

2007/0197247 A1 *

2007/0210908 A1

2007/0219856 A1

2007/0222652 A1

2007/0226062 A1

2007/0238525 A1

2007/0243936 A1

2007/0244570 A1

2007/0244585 A1

2007/0244749 A1

2007/0265089 A1

2007/0294410 A1

2008/0005037 A1

2008/0013927 A1

2008/0051201 A1

2008/0066129 A1

2008/0076497 A1

2008/0104630 A1

2008/0146337 A1

2008/0169605 A1

2008/0222672 A1

2008/0240681 A1

2008/0248865 A1

2008/0270288 A1

2008/0288600 A1

2009/0011781 A1

2009/0094632 A1

2009/0103892 A1

2009/0186676 A1

2009/0163271 A1

2009/0228351 A1

2009/0234674 A1

2009/0264188 A1

2009/0271512 A1

2010/0099421 A1

2010/0099471 A1

2010/0107194 A1

2010/0120503 A1

2010/0137057 A1

2010/0203936 A1

2010/0279764 A1

2010/0296511 A1

2011/0016224 A1

2011/0053681 A1

2011/0065490 A1

2011/0081958 A1

2011/0116461 A1

2011/0130197 A1

2011/0227287 A1

2011/0269548 A1

11/2006

11/2006

11/2006

11/2006

11/2006

12/2006

1/2007

1/2007

1/2007

2/2007

2/2007

3/2007

4/2007

4/2007

4/2007

4/2007

4/2007

5/2007

5/2007

5/2007

6/2007

7/2007

7/2007

8/2007

8/2007

9/2007

9/2007

9/2007

9/2007

10/2007

10/2007

10/2007

10/2007

10/2007

10/2007

11/2007

12/2007

1/2008

1/2008

2/2008

3/2008

3/2008

5/2008

6/2008

7/2008

9/2008

10/2008

10/2008

10/2008

11/2008

1/2009

4/2009

4/2009

7/2009

9/2009

9/2009

9/2009

10/2009

10/2009

4/2010

4/2010

4/2010

5/2010

6/2010

8/2010

11/2010

11/2010

1/2011

3/2011

3/2011

4/2011

5/2011

6/2011

9/2011

11/2011

Mikkelson et al.

Zinevitch

Westerman

Westerman

Nehmadi et al.

Westerman

Jordan et al.

Boaz

Horbach et al.

Lockton

Romik

Huske et al.

Lockton et al.

Mizoguchi et al.

Paila et al.

Abbott

Asher

Ambady

Schloter

Jolna et al.

Katz

Nagashima et al.

Reich

Koizumi

Inselberg

Putterman et al.

Ahmad-Taylor

Cattone et al.

Hughes et al.

Suomela

Binenstock et al.

Speiser et al.

Speiser et al.

Speiser et al.

Robarts

Pandya

Hammad

Kelly et al.

Lore

Katcher et al.

Kiskis et al.

Bruce

Halonen

Shuster et al.

Piesing

Fukushima

Tedesco

Butterly et al.

Clark

Merrill et al.

Newman et al.

Hirayama

Amaitis et al.

George et al.

Rijsenbrij

Wurster

Soukup

Jorgensen

Patel et al.

Feeney et al.

McKissick et al.

Hoffman et al.

Fleming

Levy

Allen et al.

Prodan

Riley

Goldman

Lutnick

Herman

Holt

Bythar et al.

Reabe

Barclay et al.

G06Q 30/02

455/517

2011/0306428 A1

2012/0058808 A1

2012/0115585 A1

2012/0157178 A1

2012/0264496 A1

2012/0282995 A1

2012/0295686 A1

2013/0005453 A1

2013/0072271 A1

2013/0079081 A1

2013/0079092 A1

2013/0079093 A1

2013/0079135 A1

2013/0079150 A1

2013/0079151 A1

2013/0196774 A1

2013/0225285 A1

2013/0225299 A1

2014/0031134 A1

2014/0100011 A1

2014/0106832 A1

2014/0128139 A1

2014/0155130 A1

2014/0155134 A1

2014/0206446 A1

2014/0237025 A1

2014/0248952 A1

2014/0256432 A1

2014/0279439 A1

2014/0287832 A1

2014/0335961 A1

2014/0335962 A1

2014/0378212 A1

2015/0011310 A1

2015/0067732 A1

2015/0148130 A1

2015/0238839 A1

2015/0238873 A1

2015/0258452 A1

2015/0356831 A1

2016/0023116 A1

2016/0045824 A1

2016/0049049 A1

2016/0054872 A1

2016/0082357 A1

2016/0121208 A1

2016/0134947 A1

2016/0217653 A1

2016/0271501 A1

2016/0361647 A1

2016/0375362 A1

2017/0036110 A1

2017/0036117 A1

2017/0043259 A1

2017/0053498 A1

2017/0065891 A1

2017/0098348 A1

2017/0103615 A1

2017/0128840 A1

2017/0221314 A1

2017/0225071 A1

2017/0225072 A1

2017/0232340 A1

2017/0243438 A1

2017/0249801 A1

2017/0252649 A1

2017/0259173 A1

2017/0264961 A1

2017/0282067 A1

2017/0296916 A1

2017/0304726 A1

2017/0345260 A1

2018/0025586 A1

2018/0071637 A1

2018/0104582 A1

2018/0104596 A1

2018/0117464 A1

2018/0140955 A1

2018/0154255 A1

12/2011

3/2012

5/2012

6/2012

10/2012

11/2012

11/2012

1/2013

3/2013

3/2013

3/2013

3/2013

3/2013

3/2013

3/2013

8/2013

8/2013

8/2013

1/2014

4/2014

4/2014

5/2014

6/2014

6/2014

7/2014

8/2014

9/2014

9/2014

9/2014

11/2014

11/2014

12/2014

1/2015

3/2015

5/2015

8/2015

8/2015

9/2015

12/2015

1/2016

2/2016

2/2016

2/2016

3/2016

5/2016

5/2016

7/2016

9/2016

12/2016

12/2016

2/2017

2/2017

2/2017

2/2017

3/2017

4/2017

4/2017

5/2017

8/2017

8/2017

8/2017

8/2017

8/2017

9/2017

9/2017

9/2017

10/2017

10/2017

10/2017

11/2017

1/2018

3/2018

4/2018

4/2018

5/2018

5/2018

6/2018

Lockton et al.

Lockton

Goldman

Lockton

Behrman et al.

Allen et al.

Lockton

Nguyen et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton

Lockton

Lockton et al.

Gingher

Lockton et al.

Shuster et al.

Lockton et al.

Lockton

Lockton et al.

Huske et al.

Cibula et al.

Lockton et al.

Brown

Lockton et al.

Lockton et al.

Lockton et al.

Sims

Lockton et al.

Howe et al.

Cibula et al.

Lockton

Arnone et al.

Lockton et al.

Osibodu

Wire

Lockton et al.

Lockton

Cibula et al.

Lockton

Lockton et al.

Huske et al.

Meyer

Balsbaugh

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton

Lockton et al.

Lockton et al.

Lockton

Merati

Malek

Lockton et al.

Lockton et al.

Lockton

Lockton et al.

Lockton et al.

Lockton

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton

Baazov

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton et al.

Lockton

US 11,235,237 B2

Page 7

(56)

References Cited

U.S. PATENT DOCUMENTS

2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102 A3	6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999
JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01/039506 A2	5/2001
WO	01/65743 A1	9/2001
WO	02/03698 A1	10/2002
WO	2005064506 A1	7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007
WO	2007016575	2/2007
WO	2007041667	4/2007
WO	2008027811 A2	3/2008
WO	2008115858 A1	9/2008

OTHER PUBLICATIONS

‘Ark 4.0 Standard Edition, Technical Overview’ www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.
“Understanding the Interactivity Between Television and Mobile commerce”, Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

“Re: Multicast Based Voting System” www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.
“IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim”, www.isk.co.usk/NEWS/dotcom/ist_sportal.html.
“Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti”, www.woodworm.cs.uml.edu/rprice/ep/henderson.
“SMS Based Voting and Survey System for Meetings”, www.abbit.be/technology/SMSSURVEY.html.
“PurpleAce Launches 3GSM Ringtone Competition”, www.wirelessdevnet.com/news/2005/jan/31/news6.html.
“On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel”, Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM ’91, pp. 1490-1499, vol. 3, IEEE, New York, NY.
Merriam-Webster, “Game” definition, <<http://www.merriam-webster.com/dictionary/agme.pg.1>.
Ducheneaut et al., “The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game”, Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369. <http://help.yahoo.com/help/us/tourn/tourn-03.html>.
Pinnacle,“The basics of reverse line movement,” Jan. 19, 2018, Retrieved on Jan. 22, 2020 , <http://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQSS7M3GD>.
Gambling Commission,“Virtual currencies, eSports and social casino gaming-position paper,” Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.
Sipko et al., “Machine learning for the prediction of professional tennis matches,” In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.
Winview Game Producer, “Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo To Start This Holiday Season,” In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , <http://www.winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.
The International Search Report and The Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.
The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

* cited by examiner

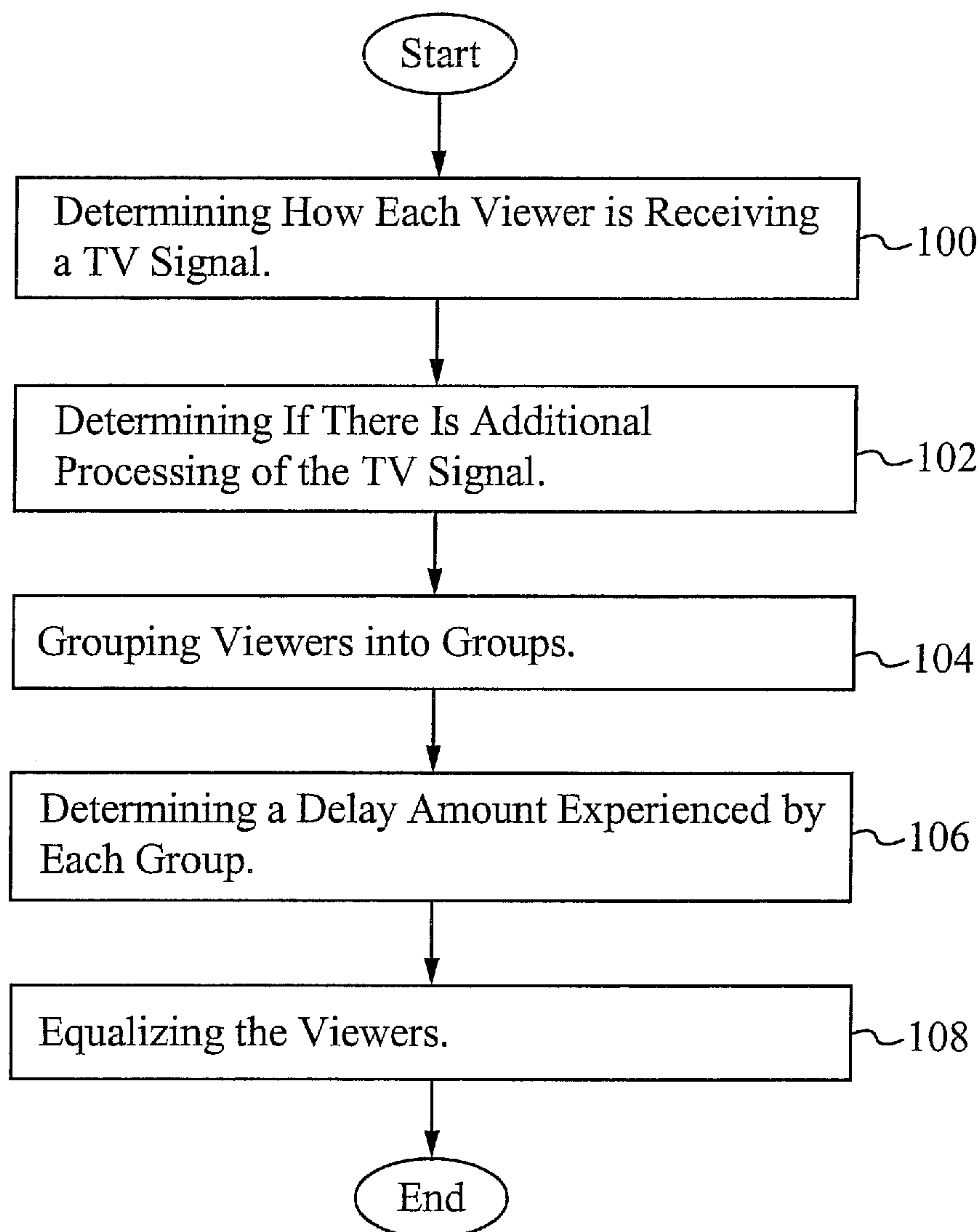


Fig. 1

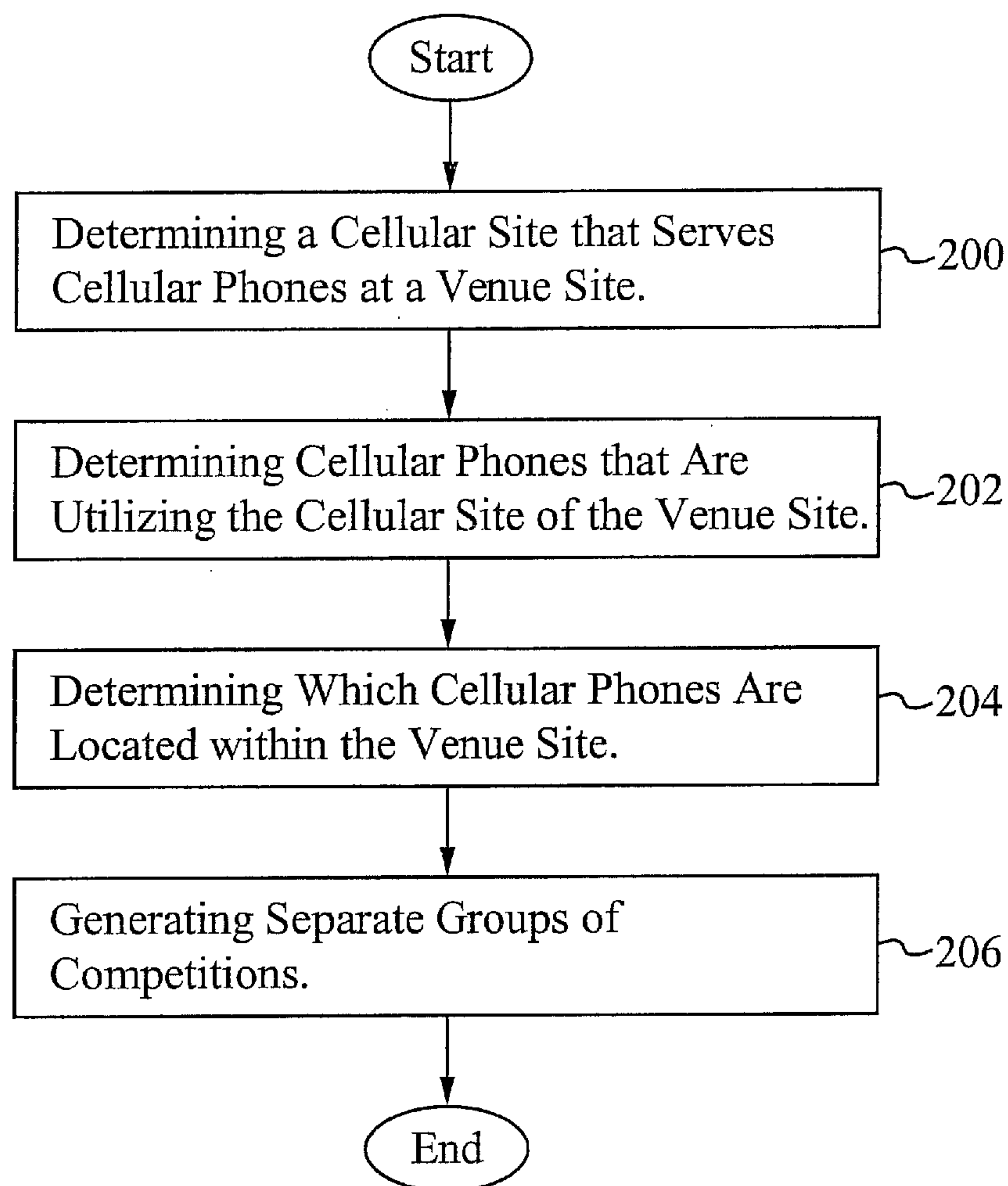


Fig. 2

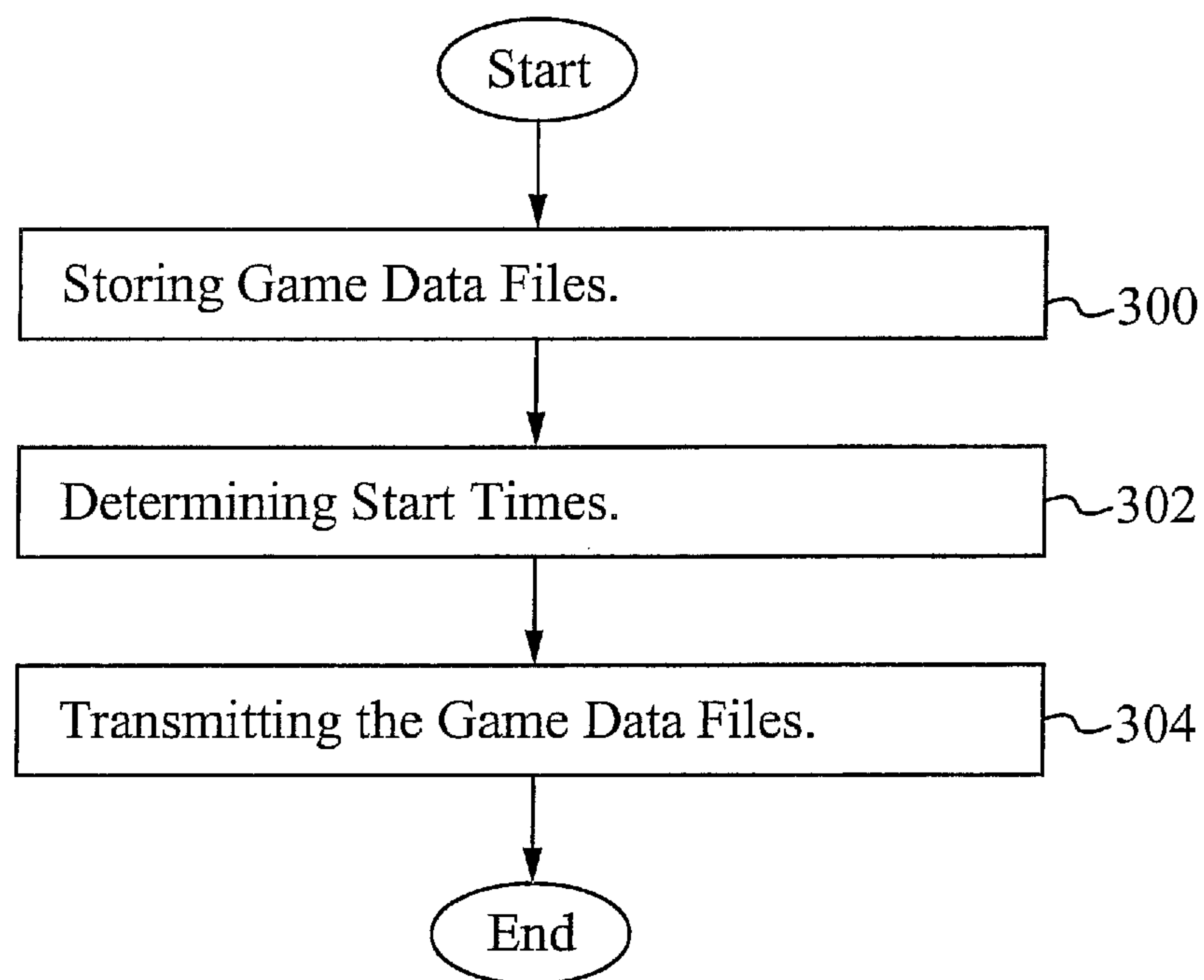


Fig. 3

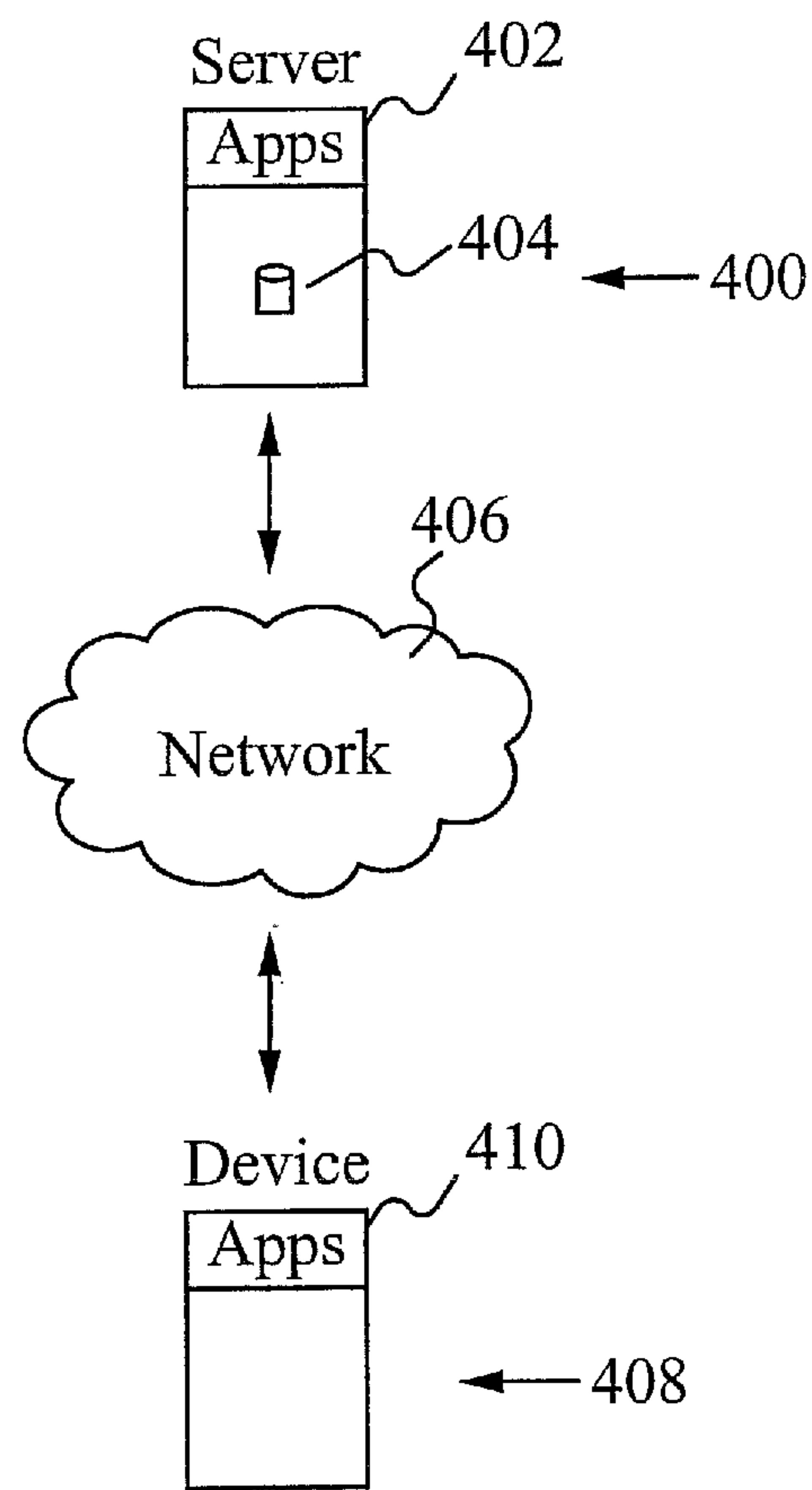


Fig. 4

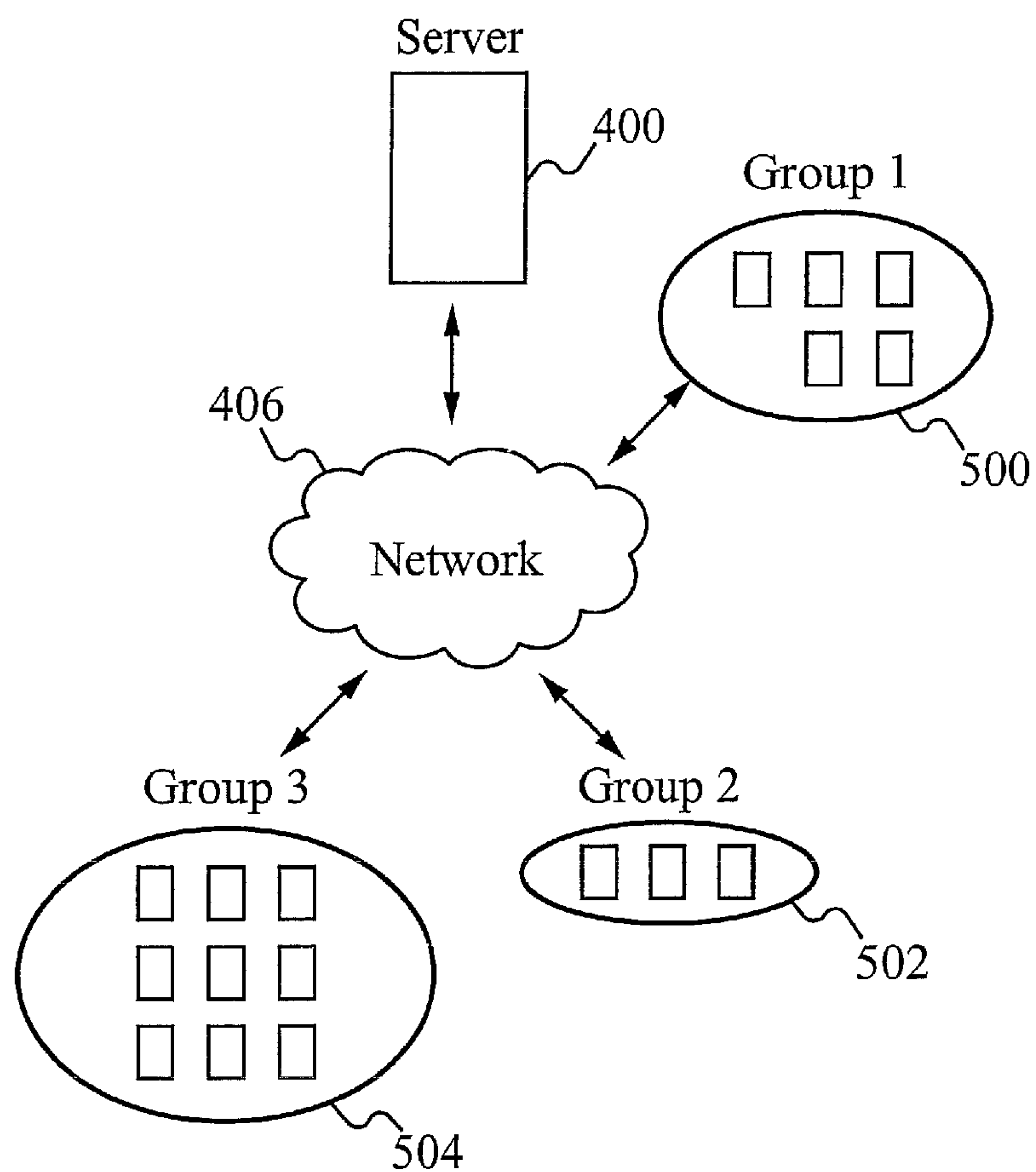


Fig. 5

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**METHODOLOGY FOR EQUALIZING
SYSTEMIC LATENCIES IN TELEVISION
RECEPTION IN CONNECTION WITH
GAMES OF SKILL PLAYED IN
CONNECTION WITH LIVE TELEVISION
PROGRAMMING**

RELATED APPLICATION(S)

This Patent Application is a continuation application of co-pending U.S. patent application Ser. No. 16/177,118, filed Oct. 31, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation application of U.S. patent application Ser. No. 15/900,438, filed Feb. 20, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation of U.S. patent application Ser. No. 15/648,101, filed Jul. 12, 2017, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation application of U.S. patent application Ser. No. 15/263,186, filed Sep. 12, 2016, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional application of U.S. patent application Ser. No. 14/172,571, filed Feb. 4, 2014, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 13/681,172, filed Nov. 19, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, (now U.S. Pat. No. 8,149,530), titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which claims priority under 35 U.S.C. § 119(e) of the co-owned United States Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

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FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish network may experience a 3 second delay compared to an individual in California using a cable network. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones

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or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

In one aspect, a method of equalizing effects of latency differences in a game of skill comprises grouping participants into a set of cohorts viewing a telecast delivered by identical transmission and reception systems, determining an amount of delay for each cohort in the set of cohorts and substantially equalizing the set of cohorts through adjustment of the amount of delay. The method further comprises determining how each participant receives a television signal. How each participant receives a television signal is selected from the group consisting of an over the air broadcast, a cable system and a satellite system. The participants are grouped based on how the participants receive a television signal. The method further comprises determining if there is additional processing of a television signal in a reception location. The additional processing occurs within a participant's location selected from the group consisting of a public place, a home, an office and a bar. Since each cable system may impose different delay at their head-ends, the specific cable provider is identified. Determining the amount of delay comprises one or more of requiring the participants to answer questions related to their television system service, requiring the participants to mark on a game playing client device, a precise time that a predetermined audio or visual event is viewed on a television program, utilizing a GPS function in a cellular phone to determine a physical location of each of the participants, utilizing an employee of a game producer who is a member of each cohort in the set of cohorts to determine the amount of delay, inserting an artifact in the telecast in which the participants respond to, and establishing the amount of delay through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal, linked to a game server, to provide information related to a precise arrival of an underlying television picture. An average is taken when requiring participants to mark the precise time the predetermined audio or visual event is viewed on the television program. Equalizing the set of cohorts comprises at least one of time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise time of reception of the telecast by the group.

In another aspect, a method of preventing a first set of participants at a live event from having an advantage over a second set of participants watching the live event on television comprises determining a cellular site that serves a set of cellular phones at a venue site, determining the set of

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cellular phones that are utilizing the cellular site of the venue site, determining a subset of cellular phones within the set of cellular phones that are located within the venue site and generating separate groups of competitions based on the subset of cellular phones within the set of cellular phones that are located within the venue site. A first group within the separate groups of competitions includes only the first set of participants and a second group within the separate groups of competitions includes only the second set of participants. An application on a server determines the cellular site, the set of cellular phones utilizing the cellular site and the subset of cellular phones located within the venue site. An application on each cellular phone within the subset of cellular phones determines if the cellular phone is located within the venue site.

In another aspect, a method of equalizing effects of latency issues with a taped television broadcast comprises storing a set of data files on a server, determining one or more start times and transmitting the set of files from the server to each mobile device at a transmission time corresponding to an appropriate start time for the mobile device. An application starts using the set of files at the one or more start times. The set of data files are game data files. Determining the one or more start times includes at least one of utilizing an employee of a game provider based on visual observation of a telecast, utilizing at least one of an audio and video recognition system with online access to the broadcast for each separate market which provides real-time tracking of the broadcast to the server, adding at least one of an audio and video event in the television broadcast which is recognizable at a starting point, designating at least one of the audio and video event in the television broadcast which is recognizable as the starting point, utilizing an audio signal, inserted within the broadcast recognizable by an audio receiver of the mobile device, and using a vertical blanking interval.

In yet another aspect, a system for equalizing effects of latency issues for a game of skill comprises a mobile device and a server coupled to the mobile device wherein the server sends a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The mobile device is within a group of mobile devices. The server determines which group the mobile device is in. The server stores game control data and transmits the game control data to the mobile device. The game control data includes delay information for implementing the lockout signal. The server contains a location determination application for determining the location of the mobile device. The mobile device contains a location determination application for determining the location of the mobile device. Variances in delays in receiving the television signal determine delays in transmitting applicable data files within a television signal reception path.

In another aspect, a device for equalizing effects of latency issues for a game of skill comprises a storage device and a set of applications contained within the storage device for sending a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The set of applications determines which group mobile devices coupled to the device are in. The device stores game control data and transfers the game control data to mobile devices. The game control data includes delay information for implementing the lockout signal. The set of applications includes a location application for determining the location of mobile

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devices. The amount of delay accounts for delays within a television signal reception path.

A network of devices comprises a plurality of mobile devices and a server coupled to the mobile devices wherein the server groups the plurality of mobile devices into a set of cohorts and wherein the server sends a lockout signal at an appropriate time based on an amount of delay to prevent users from submitting a response after they see the outcome. Each cohort within the set of cohorts is based on a signal reception path. The signal reception path is selected from the group consisting of an over the air network, a cable network and a satellite network. The server stores game control data and transfers the game control data to each mobile device within the plurality of mobile devices. The game control data is specific for each cohort within the set of cohorts. The game control data includes delay information for equalizing the lockout signal. The amount of delay accounts for delays within a television signal reception path.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention.

DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODS ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

The present invention addresses three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays of a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars. In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation

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delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game is based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the

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system addressed in the present invention is to ensure the competitors feel they are on equal footing.

The present invention solves the above described issue through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. The present invention relies on a variety of methodologies which are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where “lock out” signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as “cohorts.” For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable “head ends” or central broadcast points serving a “cohort.” This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts which are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider.

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These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers’ television sets.

In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game “lock out” signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers’ cohort.

Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of “lock out” data relative to the event triggering the “lock out,” based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive “lock out” signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the “lock out” signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step **100**, it is determined how each viewer receives a television signal, where possibilities include an over the air broadcast, a particular cable system or a particular satellite system. In the step **102**, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant’s house, office, bar or other location from an item such as a DVR. In the step **104**, the viewers/participants are grouped into groups also referred to as cohorts. In the step **106**, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step **108**, the viewers/participants are equalized. The

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methods of equalization vary, but some examples include time stamping on the game “lock out” signals, imposing a time stamp on the entire data stream so that competitors receiving their television information is slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers’ group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive “lock out” signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a “shot on goal” within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their “lock out” signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy’s, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user’s physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, SnapSmart and Snapcore, which provide a cellular phone’s physical location within a matter of yards.

For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve

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cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. The present invention is also able to involve a communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor’s phone, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server’s software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game’s venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced though the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step 200, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step 202, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step 204, it is determined if the cellular phone is located within the venue site. The determination is made by comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step 204, separate groups are generated in the step 206. A group is generated for users that are located at the live venue, and a group is generated for those players that are watching live on television. Therefore, the live players who do not expe-

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rience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of Fortune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different com-

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mercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

This invention protects a system which first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually

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keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs. In the step 300, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step 302, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining start times are possible as well. In the step 304, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention. A server 400 contains applications 402 and a storage mechanism 404. The applications 402 include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server 400 is able to determine which cellular phones are logged into the server 400 and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism 404 is utilized for storing the applications 402 in addition to selections and results. The storage mechanism 404 preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server 400 is part of a network 406. A device 408 couples to the server 400 through the network 406. In some embodiments the network 406 includes the Internet. In some embodiments, the network 406 includes a cellular network. Also, in some embodiments, the network 406 includes both the Internet and a cellular network. The device 408 is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server 400 is possible. The device 408 stores a variety of applications 410. A game application is stored on the device 408. In some embodiments, software to identify the physical location of the device 408 is stored on the device 408. The device 408 also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device 408 receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server 400 and on the device 408, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention. A server 400 is coupled to many devices through a network 406. The devices are grouped into groups or cohorts as described above. For example, Group 1 of devices 500 includes a set of devices

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that receive a television signal through cable with a delay time of x. Group 2 of devices 502 includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices 504 includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

To utilize the present invention, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the present invention. The user simply plays as usual except that with the present invention, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, implementing the present invention is able to be automated or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the present invention is able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the attending participants are in one group and the television viewing participants are in another group.

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For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong ques-
tions. Therefore, the present invention ensures that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of equalizing effects of latency issues in synchronization of display of data files on an Internet coupled device with a live event, wherein a game of skill or chance or entertainment is run in conjunction with the live event and wherein the game of skill or chance or entertainment comprises data files, the method comprising:

- a. storing the data files on a server which relate to the live event;
- b. determining one or more game elements in the live event; and
- c. transmitting the files from the server to each of a plurality of Internet coupled devices corresponding to the one or more game elements; and
- d. sending a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment after a result of the game element has been revealed within the live event, wherein determining a time of the lockout signal includes utilizing a person observing a television feed located remotely from the live event.

2. The method as claimed in claim 1 wherein an application on the Internet coupled device starts using the data files at one or more start times.

3. The method as claimed in claim 1 wherein the data files are television broadcast related files.

4. The method as claimed in claim 2 wherein determining the one or more start times includes at least one of:

- a. utilizing a signal originating from the venue to synchronize data files based on visual observation of a telecast;
- b. utilizing an individual in physical attendance at a venue corresponding to the live event;
- c. utilizing a computer generated signal based on real time computer analysis of a data feed originating from the live event;

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d. utilizing at least one of an audio and video recognition system with online access to the live event for each separate market which provides real-time tracking of the live event to the server;

e. inserting at least one of an audio and video event in the live event which is recognizable at a starting point;

f. designating at least one of the audio and video event in the live event which is recognizable as the starting point;

g. utilizing an audio signal, inserted within the live event recognizable by an audio receiver of the Internet coupled device; and

h. using a vertical blanking interval.

5. The method of claim 1 wherein the live event comprises commercials.

6. The method of claim 5 wherein questions or information related to the commercials to be displayed at precise times before, during and after the commercials are sent to the Internet coupled device in synchronization with the live event.

7. The method of claim 6 wherein an incentive is awarded for answering the questions on the Internet coupled device in synchronization with the live event of the commercials.

8. The method of claim 1 wherein existing game elements in the live event are used as synchronization points as start points for previously downloaded data files to an Internet coupled device.

9. The method of claim 1 wherein a synchronization point is a visible or audible event located within the live event, and the synchronization point is used to synchronize the live event and the set of data files.

10. The method of claim 1 wherein information is inserted in a Vertical Blanking Interval (VBI) or equivalent of a show and tracked online in real-time.

11. The method of claim 1 wherein information is embedded in the live event and tracked online in real-time.

12. The method of claim 2 wherein determining the one or more start times of the live event includes using a recognizable signal recognizable by the Internet coupled devices.

13. The method of claim 1 further comprising delivering a start time of a commercial using a recognizable signal recognizable by the Internet coupled device.

14. The method of claim 1 wherein the data files comprise pre-produced data files.

15. The method of claim 14 wherein the pre-produced data files comprise real-time entertainment sent simultaneously to the Internet coupled devices.

16. The method of claim 14 wherein a plurality of synchronization points are used by the Internet coupled devices to continuously check to ensure the pre-produced data files are synchronized with the live event.

17. The method of claim 14 wherein inserted audio or video in the live event is used to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

18. The method of claim 17 wherein the inserted audio or video is used by a client to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

19. The method of claim 17 wherein the inserted audio or video is used by a server to periodically check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

20. The method of claim 1 wherein an artifact is inserted into the live event recognizable by an audio receiver in an Internet coupled device which is utilized to start and con-

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tinually keep a game of skill or chance or entertainment synchronized with the live event.

21. The method of claim 1 wherein the game of skill or chance ends when the live event ends.

22. The method of claim 1 wherein the server sends the game of skill or chance or entertainment to an application resident on the Internet coupled device.

23. The method of claim 1 wherein the game of skill or chance or entertainment is stored in a memory of the Internet coupled device.

24. The method of claim 1 wherein the game of skill or chance or entertainment is stored in random access memory of the Internet coupled device.

25. The method of claim 1 further comprising displaying the game of skill or chance or entertainment on the Internet coupled device.

26. The method of claim 1 wherein an earliest receipt of a television signal by participants is utilized for equalizing locking out all participants receiving the live event later.

27. The method of claim 1 further comprising establishing a delay between reception of a broadcast of the live event and the live event.

28. The method of claim 27 wherein establishing the delay results in synchronization of reception of the broadcast of the live event and presentation of game-related data on the Internet coupled device allowing the presented game-related data to coincide with the game elements in the live event.

29. The method of claim 1 further comprising determining a shortest delay experienced by participants in receiving a broadcast of the live event and applying lockouts to the participants based on the shortest delay.

30. The method of claim 1 wherein participants comprise ad hoc or preexisting groups of friends competing in a separate competition from disparate physical locations.

31. The method of claim 9 wherein the synchronization points are the audio or video data for the live event residing on the server online with the Internet coupled device.

32. The method of claim 1 wherein participants constitute ad hoc or existing groups of geographically dispersed friends participating in a separate game of chance or skill or entertainment.

33. The method of claim 32 wherein the participants are ad hoc or previously organized groups of friends competing against each other in a separate contest.

34. The method of claim 33 wherein equalizing the participants comprises time stamping an amount of delay on game-related data.

35. The method of claim 1 wherein the live event is recorded and stored on a digital video recorder.

36. The method of claim 1 further comprising determining if there is additional processing of a broadcast of the live event increasing a total length of delay.

37. The method of claim 1 wherein a delay includes a digital video recorder delay wherein the live event is recorded on the digital video recorder.

38. The method of claim 1 further comprising equalizing a delay wherein equalizing incorporates time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise viewing time of the live event.

39. The method of claim 1 wherein a client used in connection with viewing a time shifted telecast of a previously recorded program utilizes automatic content recognition to synchronize preproduced game data files to precisely synchronize game data files with the recorded telecast.

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40. The method of claim 1 wherein a client used in connection with viewing a delayed program utilizes automatic content recognition to synchronize preproduced game data files to precisely synchronize game data files with the recorded telecast.

41. The method of claim 1 wherein determining comprises establishing an amount of delay through an automated system linked to a server, which samples an audio track of a satellite or over the air broadcast signal, to provide information related to a precise arrival of a broadcast of the live event.

42. The method of claim 1 wherein the live event is recorded on a digital video recorder.

43. The method of claim 1 further comprising equalizing latency issues comprising determining an amount of delay for an earliest arriving broadcast of the live event, imposing the amount of delay on an entire game data stream, and sending game control data to one or more participants at a same time relative to receipt of a broadcast of the live event.

44. The method of claim 43 wherein client software delays presentation of game data based on a precise time of reception of the broadcast by a group.

45. The method of claim 43 wherein the server delays presentation of game data based on a precise time of reception of the broadcast by a group.

46. The method of claim 1 further comprising determining an amount of delay, imposing the amount of delay on a game data stream, sending game control data to one or more participants taking into account the amount of delay and grouping users into one or more cohorts, wherein a first amount of delay is imposed on participants in a first cohort and a second amount of delay is imposed on participants in a second cohort.

47. The method of claim 1 wherein the live event and the data files are presented on a same screen.

48. The method of claim 1 wherein the live event and the data files are presented on different screens.

49. The method of claim 1 wherein electronics receiving and displaying the live event on a first screen coupled to a game server via the Internet provide control information to a second screen.

50. The method of claim 1 wherein the live event and the data files are synchronized utilizing one or more start signals generated by a game producer.

51. The method of claim 1 wherein the live event and the data files are synchronized utilizing a signal sent from a game server at a predetermined time.

52. The method of claim 1 wherein the person is an employee of a game or related service provider.

53. The method of claim 1 wherein determining the time of the lockout signal includes utilizing a person based on physical attendance at a venue corresponding to the live event.

54. The method of claim 53 wherein the venue comprises a physical venue for an event.

55. The method of claim 54 wherein the person observes the event at the physical venue.

56. The method of claim 1 wherein the lockout is sent immediately before competitors are able to see a play unfold.

57. The method of claim 1 wherein the lockout is sent immediately before competitors are able to hear a play unfold.

58. The method of claim 1 wherein the lockout is sent immediately before a scoring chance in an event.

59. The method of claim 1 wherein the lockout signal applies for a limited amount of time.

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60. The method of claim 1 wherein the lockout signal applies for an action lasting a limited amount of time.

61. The method of claim 1 wherein the time of the lockout signal is automated by software utilizing a live data feed originating from the live event.

62. The method of claim 1 wherein the television feed observed by the person has a predetermined amount of latency from the live event.

63. The method of claim 1 wherein the data files are continuously produced based on unfolding action within the live event.

64. A method of equalizing effects of latency issues in synchronization of display of data files on an Internet coupled device with a live event, wherein a game of skill or chance or entertainment is run in conjunction with the live event and wherein the game of skill or chance or entertainment comprises data files, the method comprising:

- a. storing the data files on a server which relate to the live event;
- b. determining one or more game elements in the live event; and
- c. transmitting the data files from the server to each of a plurality of Internet coupled devices corresponding to the one or more game elements;
- d. sending a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment after a result of the game element has been revealed within the live event; and
- e. equalizing latency issues comprising determining an amount of delay, imposing the amount of delay on a game data stream and sending game control data to one or more participants taking into account the amount of delay.

65. The method of claim 64 wherein the amount of delay is imposed on the entire game data stream.

66. The method of claim 64 further comprising grouping participants into one or more cohorts, wherein a first amount of delay is imposed on participants in a first cohort and a second amount of delay is imposed on participants in a second cohort.

67. The method of claim 64 wherein client software delays presentation of game data based on a precise time of reception of a broadcast of the live event by a group.

68. The method of claim 67 wherein the server delays presentation of game data based on a precise time of reception of a broadcast of the live event by a group.

69. The method of claim 67 wherein sending the lockout signal comprises utilizing a person based on physical attendance at a venue corresponding to the live event.

70. The method of claim 64 wherein an application on the Internet coupled device starts using the set of files at one or more start times.

71. The method of claim 64 wherein the live event comprises commercials.

72. The method of claim 71 wherein questions or information related to the commercials to be displayed at precise times before, during and after the commercials are sent to the Internet coupled device in synchronization with the live event.

73. The method of claim 72 wherein an incentive is awarded for answering the questions on the Internet coupled device in synchronization with the live event of the commercials.

74. The method of claim 64 wherein existing game elements in the live event are used as synchronization points as start points for previously downloaded data files to an Internet coupled device.

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75. The method of claim 64 wherein a synchronization point is a visible or audible event located within the live event, and the synchronization point is used to synchronize the live event and the set of data files.

76. The method of claim 64 wherein information is inserted in a Vertical Blanking Interval (VBI) or equivalent of a show and tracked online in real-time.

77. The method of claim 64 wherein information is embedded in the live event and tracked online in real-time.

78. The method of claim 70 wherein determining the one or more start times of the live event includes using a recognizable signal recognizable by the Internet coupled devices.

79. The method of claim 64 further comprising delivering a start time of a commercial using a recognizable signal recognizable by the Internet coupled device.

80. The method of claim 64 wherein a game of skill or chance or entertainment is run in conjunction with the live event and wherein the game of skill or chance or entertainment comprises pre-produced data files.

81. The method of claim 80 wherein the pre-produced data files comprise real-time entertainment sent simultaneously to the Internet coupled devices.

82. The method of claim 80 wherein a plurality of synchronization points are used by the Internet coupled devices to continuously check to ensure the pre-produced data files are synchronized with the live event.

83. The method of claim 80 wherein inserted audio or video in the live event is used to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

84. The method of claim 83 wherein the inserted audio or video is used by a client to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

85. The method of claim 83 wherein the inserted audio or video is used by a server to periodically check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

86. The method of claim 64 wherein an artifact is inserted into the live event recognizable by an audio receiver in an Internet coupled device which is utilized to start and continually keep a game of skill or chance or entertainment synchronized with the live event.

87. The method of claim 64 wherein the game of skill or chance ends when the live event ends.

88. The method of claim 64 wherein the server sends the game of skill or chance or entertainment to the Internet coupled device.

89. The method of claim 64 wherein the game of skill or chance or entertainment is stored in a memory of the Internet coupled device.

90. The method of claim 64 wherein the game of skill or chance or entertainment is stored in random access memory of the Internet coupled device.

91. The method of claim 64 further comprising displaying the game of skill or chance or entertainment on the Internet coupled device.

92. The method of claim 64 wherein an earliest receipt of a television signal by participants is utilized for equalizing locking out all participants receiving the live event later.

93. The method of claim 64 further comprising determining the amount of delay between reception of a broadcast of the live event and the live event.

94. The method of claim 93 wherein determining the amount of delay results in synchronization of reception of the broadcast of the live event and presentation of game-

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related data on the Internet coupled device allowing the presented game-related data to coincide with the game elements in the live event.

95. The method of claim 64 further comprising determining a shortest delay experienced by participants in receiving a broadcast of the live event and applying lockouts to the participants based on the shortest delay.

96. The method of claim 64 wherein participants comprise ad hoc or preexisting groups of friends competing in a separate competition from disparate physical locations.

97. The method of claim 75 wherein the synchronization points are the audio or video data for the live event residing on the server online with the Internet coupled device.

98. The method of claim 64 wherein participants constitute ad hoc or existing groups of geographically dispersed friends participating in a separate game of chance or skill or entertainment.

99. The method of claim 98 wherein the participants are ad hoc or previously organized groups of friends competing against each other in a separate contest.

100. The method of claim 99 wherein equalizing the participants comprises time stamping an amount of delay on game-related data.

101. The method of claim 64 wherein the live event is recorded and stored on a digital video recorder.

102. The method of claim 64 further comprising determining if there is additional processing of a broadcast of the live event increasing a total length of delay.

103. The method of claim 64 wherein a delay includes a digital video recorder delay wherein the live event is recorded on the digital video recorder.

104. The method of claim 64 further comprising equalizing a delay wherein equalizing incorporates time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise viewing time of the live event.

105. The method of claim 64 wherein a client used in connection with viewing a time shifted telecast of a previously recorded program utilizes automatic content recognition to synchronize preproduced game data files to precisely synchronize game data files with the recorded telecast.

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106. The method of claim 64 wherein a client used in connection with viewing a delayed program utilizes automatic content recognition to synchronize preproduced game data files to precisely synchronize game data files with the recorded telecast.

107. The method of claim 64 wherein determining comprises determining the amount of delay through an automated system linked to a server, which samples an audio track of a satellite or over the air broadcast signal, to provide information related to a precise arrival of a broadcast of the live event.

108. The method of claim 64 wherein the live event and the data files are presented on a same screen.

109. The method of claim 64 wherein the live event and the data files are presented on different screens.

110. The method of claim 64 wherein electronics receiving and displaying the live event on a first screen coupled to a game server via the Internet provide control information to a second screen.

111. The method of claim 64 wherein the live event and the data files are synchronized utilizing one or more start signals generated by a game producer.

112. The method of claim 64 wherein the live event and the data files are synchronized utilizing a signal sent from a game server at a predetermined time.

113. The method of claim 64 wherein the lockout is sent immediately before competitors are able to see a play unfold.

114. The method of claim 64 wherein the lockout is sent immediately before competitors are able to hear a play unfold.

115. The method of claim 64 wherein the lockout is sent immediately before a scoring chance in an event.

116. The method of claim 64 wherein the lockout signal applies for a limited amount of time.

117. The method of claim 64 wherein the lockout signal applies for an action lasting a limited amount of time.

118. The method of claim 64 wherein sending the lockout signal is automated by software utilizing a live data feed originating from the live event.

119. The method of claim 64 wherein the data files are continuously produced based on unfolding action within the live event.

* * * * *

Exhibit 3



US011338189B2

(12) **United States Patent**
Lockton

(10) **Patent No.: US 11,338,189 B2**
(45) **Date of Patent: *May 24, 2022**

(54) **METHOD OF AND SYSTEM FOR
CONDUCTING MULTIPLE CONTESTS OF
SKILL WITH A SINGLE PERFORMANCE**

(56) **References Cited**

U.S. PATENT DOCUMENTS

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2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.

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(Continued)

FOREIGN PATENT DOCUMENTS

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CA 2252074 11/1997
CA 2252021 11/1998

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(Continued)

OTHER PUBLICATIONS

This patent is subject to a terminal dis-
claimer.

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

(Continued)

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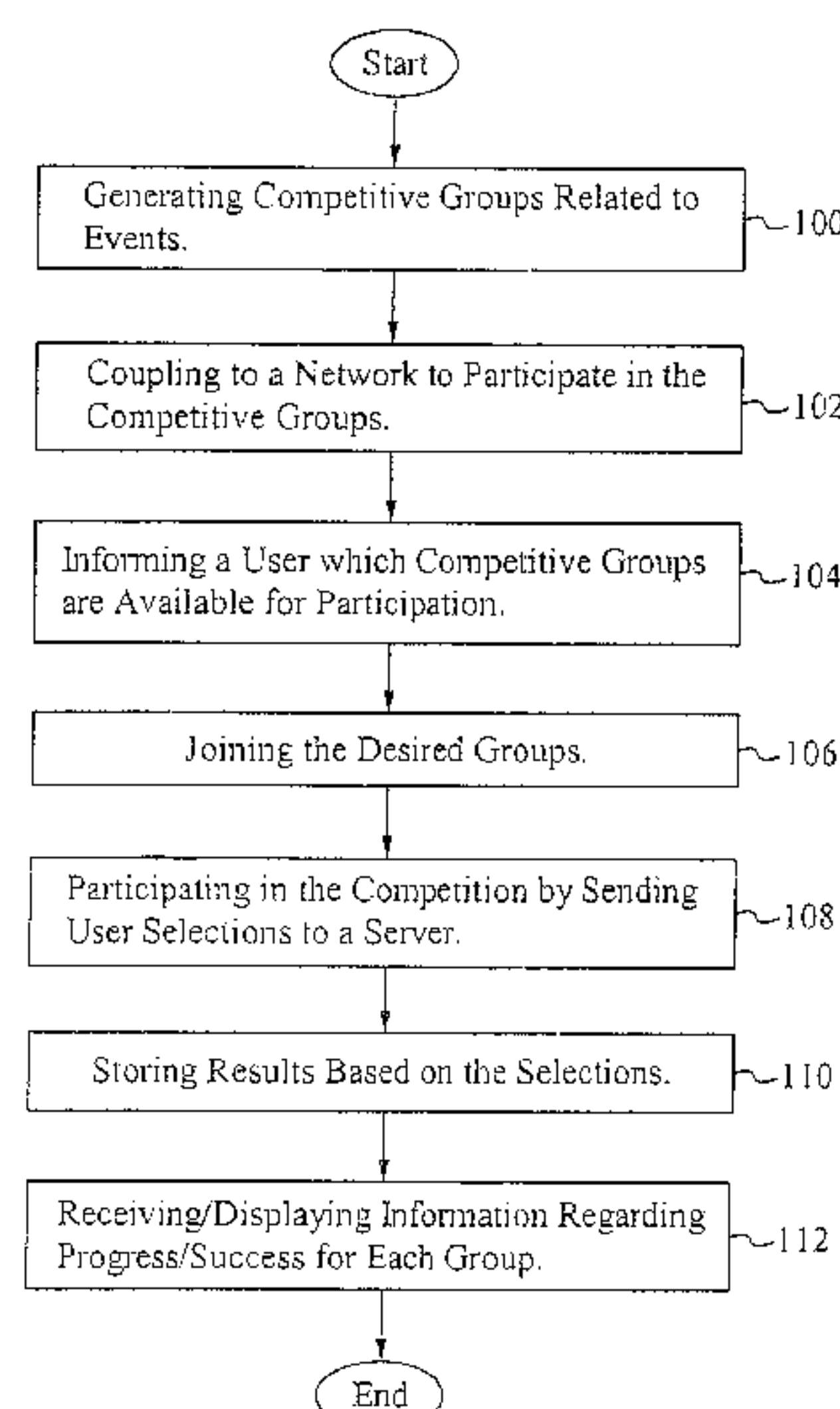
None

See application file for complete search history.

(57) **ABSTRACT**

A method and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of each competition either via email, text message or when logging into the network via a website. The users select which competition groups to join. After joining the desired groups, users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated based on each competition group, so that users can continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

38 Claims, 3 Drawing Sheets



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continuation of application No. 15/485,145, filed on Apr. 11, 2017, now Pat. No. 10,186,116, which is a continuation of application No. 14/927,227, filed on Oct. 29, 2015, now Pat. No. 9,652,937, which is a continuation of application No. 14/706,802, filed on May 7, 2015, now Pat. No. 9,314,686, which is a continuation of application No. 13/246,464, filed on Sep. 27, 2011, now Pat. No. 9,056,251, which is a continuation-in-part of application No. 13/215,052, filed on Aug. 22, 2011, now Pat. No. 8,622,798, which is a continuation of application No. 11/652,240, filed on Jan. 10, 2007, now Pat. No. 8,002,618.

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(56) References Cited

U.S. PATENT DOCUMENTS

4,141,548 A 2/1979 Everton
4,270,755 A 6/1981 Willhide et al.
4,386,377 A 5/1983 Hunter, Jr.
4,496,148 A 1/1985 Morstain et al.
4,521,803 A 6/1985 Glittering
4,592,546 A 6/1986 Fascenda et al.
4,816,904 A 3/1989 McKenna et al.
4,918,603 A 4/1990 Hughes et al.
4,930,010 A 5/1990 MacDonald
5,013,038 A 5/1991 Luvenberg
5,018,736 A 5/1991 Pearson et al.
5,035,422 A 7/1991 Berman
5,073,931 A 12/1991 Audebert et al.
5,083,271 A 1/1992 Thatcher et al.
5,083,800 A 1/1992 Lockton
5,119,295 A 6/1992 Kapur
5,120,076 A 6/1992 Luxenberg et al.
5,213,337 A 5/1993 Sherman
5,227,874 A 7/1993 Von Kohom
5,256,863 A 10/1993 Ferguson
5,263,723 A 11/1993 Pearson et al.
5,283,734 A 2/1994 Von Kohom
5,327,485 A 7/1994 Leaden
5,343,236 A 8/1994 Koppe et al.
5,343,239 A 8/1994 Lappington et al.
5,417,424 A 5/1995 Snowden
5,462,275 A 10/1995 Lowe et al.
5,479,492 A 12/1995 Hofstee et al.
5,488,659 A 1/1996 Millani
5,519,433 A 5/1996 Lappington
5,530,483 A 6/1996 Cooper
5,553,120 A 9/1996 Katz
5,566,291 A 10/1996 Boulton et al.
5,585,975 A 12/1996 Bliss
5,586,257 A 12/1996 Perlman
5,589,765 A 12/1996 Ohmart et al.
5,594,938 A 1/1997 Engel
5,618,232 A 4/1997 Martin
5,628,684 A 5/1997 Jean-Etienne

5,636,920 A 6/1997 Shur et al.
5,638,113 A 6/1997 Lappington
5,643,088 A 7/1997 Vaughn et al.
5,663,757 A 9/1997 Morales
5,759,101 A 6/1998 Won Kohom
5,761,606 A 6/1998 Wolzien
5,762,552 A 6/1998 Voung et al.
5,764,275 A 6/1998 Lappington et al.
5,794,210 A 8/1998 Goldhaber et al.
5,805,230 A 9/1998 Staron
5,813,913 A 9/1998 Berner et al.
5,818,438 A 10/1998 Howe et al.
5,828,843 A 10/1998 Grimm
5,838,774 A 11/1998 Weiser, Jr.
5,838,909 A 11/1998 Roy
5,846,132 A 12/1998 Junkin
5,848,397 A 12/1998 Marsh et al.
5,860,862 A 1/1999 Junkin
5,894,556 A 4/1999 Grimm
5,916,024 A 6/1999 Von Kohom
5,870,683 A 9/1999 Wells et al.
5,970,143 A 10/1999 Schneier et al.
5,971,854 A 10/1999 Pearson et al.
5,987,440 A 11/1999 O’Neil et al.
6,009,458 A 12/1999 Hawkins et al.
6,015,344 A 1/2000 Kelly et al.
6,016,337 A 1/2000 Pykalisto
6,038,599 A 3/2000 Black
6,042,477 A 3/2000 Addink
6,064,449 A 5/2000 White
6,104,815 A 8/2000 Alcorn et al.
6,110,041 A 8/2000 Walker et al.
6,117,013 A 9/2000 Elba
6,126,543 A 10/2000 Friedman
6,128,660 A 10/2000 Grimm
6,135,881 A 10/2000 Abbott et al.
6,154,131 A 11/2000 Jones, II
6,174,237 B1 1/2001 Stephenson
6,182,084 B1 1/2001 Cockrell et al.
6,193,610 B1 2/2001 Junkin
6,222,642 B1 4/2001 Farrell et al.
6,233,736 B1 5/2001 Wolzien
6,251,017 B1 6/2001 Leason et al.
6,263,447 B1 7/2001 French
6,267,670 B1 7/2001 Walker
6,287,199 B1 9/2001 McKeown et al.
6,293,868 B1 9/2001 Bernard
6,312,336 B1 11/2001 Handelman et al.
6,343,320 B1 1/2002 Fairchild
6,345,297 B1 2/2002 Grimm
6,371,855 B1 4/2002 Gavriloff
6,373,462 B1 4/2002 Pan
6,411,969 B1 6/2002 Tam
6,416,414 B1 7/2002 Stadelmann
6,418,298 B1 7/2002 Sonnenfeld
6,425,828 B2 7/2002 Walker et al.
6,434,398 B1 8/2002 Inselberg
6,446,262 B1 9/2002 Malaure et al.
6,470,180 B1 10/2002 Kotzin et al.
6,475,090 B2 11/2002 Gregory
6,524,189 B1 2/2003 Rautila
6,527,641 B1 3/2003 Sinclair et al.
6,530,082 B1 3/2003 Del Sesto et al.
6,536,037 B1 3/2003 Guheen et al.
6,578,068 B1 6/2003 Bowma-Amuah
6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,611,755 B1 8/2003 Coffee
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 4/2004 Karbowski
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.

US 11,338,189 B2

Page 3

(56)

References Cited

U.S. PATENT DOCUMENTS

6,760,595	B2	7/2004	Insellberg	7,430,718	B2	9/2008	Gariepy-Viles
6,763,377	B1	7/2004	Balknap et al.	7,452,273	B2	11/2008	Amaitis et al.
6,766,524	B1	7/2004	Matheny et al.	7,460,037	B2	12/2008	Cattone et al.
6,774,926	B1	8/2004	Ellis et al.	7,461,067	B2	12/2008	Dewing et al.
6,785,561	B1	8/2004	Kim	7,502,610	B2	3/2009	Maher
6,801,380	B1	10/2004	Saturdja	7,510,474	B2	3/2009	Carter, Sr.
6,806,889	B1	10/2004	Malaure et al.	7,517,282	B1	4/2009	Pryor
6,807,675	B1	10/2004	Millard et al.	7,534,169	B2	5/2009	Amaitis et al.
6,811,482	B2	11/2004	Letovsky	7,543,052	B1	6/2009	Cesa Klein
6,811,487	B2	11/2004	Sengoku	7,562,134	B1	7/2009	Fingerhut et al.
6,816,628	B1	11/2004	Sarachik et al.	7,602,808	B2	10/2009	Ullmann
6,817,947	B2	11/2004	Tanskanen	7,610,330	B1	10/2009	Quinn
6,824,469	B2	11/2004	Allibhoy et al.	7,614,944	B1	11/2009	Hughes et al.
6,837,789	B2	1/2005	Garahi et al.	7,630,986	B1	12/2009	Herz et al.
6,837,791	B1	1/2005	McNutt et al.	7,693,781	B2	4/2010	Asher et al.
6,840,861	B2	1/2005	Jordan et al.	7,699,707	B2	4/2010	Bahou
6,845,389	B1	1/2005	Sen	7,702,723	B2	4/2010	Dyl
6,846,239	B2	1/2005	Washio	7,711,628	B2	5/2010	Davie et al.
6,849,255	B2	2/2005	Gazit	7,729,286	B2	6/2010	Mishra
6,857,122	B1	2/2005	Takeda et al.	7,753,772	B1	7/2010	Walker
6,863,610	B2	3/2005	Vancraeynest	7,753,789	B2	7/2010	Walker et al.
6,870,720	B2	3/2005	Iwata et al.	7,780,528	B2	8/2010	Hirayama
6,871,226	B1	3/2005	Ensley et al.	7,828,661	B1	11/2010	Fish
6,873,610	B1	3/2005	Noever	7,835,961	B2	11/2010	Davie et al.
6,884,166	B2	4/2005	Leen et al.	7,860,993	B2	12/2010	Chintala
6,884,172	B1	4/2005	Lloyd et al.	7,886,003	B2	2/2011	Newman
6,887,159	B2	5/2005	Leen et al.	7,907,211	B2	3/2011	Oostveen et al.
6,888,929	B1	5/2005	Saylor	7,907,598	B2	3/2011	Anisimov
6,893,347	B1	5/2005	Zilliacus et al.	7,909,332	B2	3/2011	Root
6,898,762	B2	5/2005	Ellis et al.	7,925,756	B1	4/2011	Riddle
6,899,628	B2	5/2005	Leen et al.	7,926,810	B2	4/2011	Fisher et al.
6,903,681	B2	6/2005	Faris	7,937,318	B2	5/2011	Davie et al.
6,908,389	B1	6/2005	Puskala	7,941,482	B2	5/2011	Bates
6,942,574	B1	9/2005	LeMay et al.	7,941,804	B1	5/2011	Herington
6,944,228	B1	9/2005	Dakss et al.	7,976,389	B2	7/2011	Cannon et al.
6,960,088	B1	11/2005	Long	8,002,618	B1	8/2011	Lockton
6,978,053	B1	12/2005	Sarachik et al.	8,006,314	B2	8/2011	Wold
7,001,279	B1	2/2006	Barber et al.	8,025,565	B2	9/2011	Leen et al.
7,029,394	B2	4/2006	Leen et al.	8,028,315	B1	9/2011	Barber
7,035,626	B1	4/2006	Luciano, Jr.	8,082,150	B2	12/2011	Wold
7,035,653	B2	4/2006	Simon et al.	8,086,445	B2	12/2011	Wold et al.
7,058,592	B1	6/2006	Heckerman et al.	8,086,510	B2	12/2011	Amaitis et al.
7,076,434	B1	7/2006	Newman et al.	8,092,303	B2	1/2012	Amaitis et al.
7,085,552	B2	8/2006	Buckley	8,092,306	B2	1/2012	Root
7,116,310	B1	10/2006	Evans et al.	8,105,141	B2	1/2012	Leen et al.
7,117,517	B1	10/2006	Milazzo et al.	8,107,674	B2	1/2012	Davis et al.
7,120,924	B1	10/2006	Katcher et al.	8,109,827	B2	2/2012	Cahill et al.
7,124,410	B2	10/2006	Berg	8,128,474	B2	3/2012	Amaitis et al.
7,125,336	B2	10/2006	Anttila et al.	8,147,313	B2	4/2012	Amaitis et al.
7,136,871	B2	11/2006	Ozer et al.	8,147,373	B2	4/2012	Amaitis et al.
7,144,011	B2	12/2006	Asher et al.	8,149,530	B1	4/2012	Lockton et al.
7,169,050	B1	1/2007	Tyler	8,155,637	B2	4/2012	Fujisawa
7,185,355	B1	2/2007	Ellis	8,162,759	B2	4/2012	Yamaguchi
7,187,658	B2	3/2007	Koyanagi	8,176,518	B1	5/2012	Junkin et al.
7,191,447	B1	3/2007	Ellis et al.	8,186,682	B2	5/2012	Amaitis et al.
7,192,352	B2	3/2007	Walker et al.	8,204,808	B2	6/2012	Amaitis et al.
7,194,758	B1	3/2007	Waki et al.	8,219,617	B2	7/2012	Ashida
7,228,349	B2	6/2007	Barone, Jr. et al.	8,240,669	B2	8/2012	Asher et al.
7,231,630	B2	6/2007	Acott et al.	8,246,048	B2	8/2012	Amaitis et al.
7,233,922	B2	6/2007	Asher et al.	8,267,403	B2	9/2012	Fisher et al.
7,240,093	B1	7/2007	Danieli et al.	8,342,924	B2	1/2013	Leen et al.
7,244,181	B2	7/2007	Wang et al.	8,342,942	B2	1/2013	Amaitis et al.
7,249,367	B2	7/2007	Bove, Jr. et al.	8,353,763	B2	1/2013	Amaitis et al.
7,254,605	B1	8/2007	Strum	8,376,855	B2	2/2013	Lockton et al.
7,260,782	B2	8/2007	Wallace et al.	8,396,001	B2	3/2013	Jung
RE39,818	E	9/2007	Slifer	8,397,257	B1	3/2013	Barber
7,283,830	B2	10/2007	Buckley	8,465,021	B2	6/2013	Asher et al.
7,288,027	B2	10/2007	Overton	8,473,393	B2	6/2013	Davie et al.
7,341,517	B2	3/2008	Asher et al.	8,474,819	B2	7/2013	Asher et al.
7,343,617	B1	3/2008	Kartcher et al.	8,535,138	B2	9/2013	Amaitis et al.
7,347,781	B2	3/2008	Schultz	8,538,563	B1	9/2013	Barber
7,351,149	B1	4/2008	Simon et al.	8,543,487	B2	9/2013	Asher et al.
7,367,042	B1	4/2008	Dakss et al.	8,555,313	B2	10/2013	Newman
7,379,705	B1	5/2008	Rados et al.	8,556,691	B2	10/2013	Leen et al.
7,389,144	B1	6/2008	Osorio	8,585,490	B2	11/2013	Amaitis et al.
				8,622,798	B2	1/2014	Lockton et al.
				8,632,392	B2	1/2014	Shore et al.
				8,634,943	B2	1/2014	Root
				8,638,517	B2	1/2014	Lockton et al.

US 11,338,189 B2

Page 4

(56)

References Cited

U.S. PATENT DOCUMENTS

8,641,511 B2	2/2014	Ginsberg et al.	10,150,031 B2	12/2018	Lockton et al.
8,659,848 B2	2/2014	Lockton et al.	10,165,339 B2	12/2018	Huske et al.
8,672,751 B2	3/2014	Leen et al.	10,186,116 B2	1/2019	Lockton
8,699,168 B2	4/2014	Lockton et al.	10,195,526 B2	2/2019	Lockton et al.
8,705,195 B2	4/2014	Lockton	10,226,698 B1	3/2019	Lockton et al.
8,708,789 B2	4/2014	Asher et al.	10,226,705 B2	3/2019	Lockton et al.
8,717,701 B2	5/2014	Lockton et al.	10,232,270 B2	3/2019	Lockton et al.
8,727,352 B2	5/2014	Amaitis et al.	10,248,290 B2	4/2019	Galfond
8,734,227 B2	5/2014	Leen et al.	10,279,253 B2	5/2019	Lockton
8,737,004 B2	5/2014	Lockton et al.	10,360,767 B2	7/2019	Russell et al.
8,738,694 B2	5/2014	Huske et al.	10,569,175 B2	2/2020	Kosai et al.
8,771,058 B2	7/2014	Alderucci et al.	10,653,955 B2	5/2020	Lockton
8,780,482 B2	7/2014	Lockton et al.	10,695,672 B2	6/2020	Lockton et al.
8,805,732 B2	8/2014	Davie et al.	10,709,987 B2	7/2020	Lockton et al.
8,813,112 B1	8/2014	Cibula et al.	10,721,543 B2	7/2020	Huske et al.
8,814,664 B2	8/2014	Amaitis et al.	10,981,070 B2	4/2021	Isgreen
8,817,408 B2	8/2014	Lockton et al.	2001/0004609 A1	6/2001	Walker et al.
8,837,072 B2	9/2014	Lockton et al.	2001/0005670 A1	6/2001	Lahtinen
8,849,225 B1	9/2014	Choti	2001/0013067 A1	8/2001	Koyanagi
8,849,255 B2	9/2014	Choti	2001/0013125 A1	8/2001	Kitsukawa et al.
8,858,313 B1	10/2014	Selfors	2001/0020298 A1	9/2001	Rector, Jr. et al.
8,870,639 B2	10/2014	Lockton et al.	2001/0032333 A1	10/2001	Flickinger
8,935,715 B2	1/2015	Cibula et al.	2001/0036272 A1	11/2001	Hirayama
9,056,251 B2	6/2015	Lockton	2001/0036853 A1	11/2001	Thomas
9,067,143 B2	6/2015	Lockton et al.	2001/0044339 A1	11/2001	Cordero
9,069,651 B2	6/2015	Barber	2001/0054019 A1	12/2001	de Fabrega
9,076,303 B1	7/2015	Park	2002/0010789 A1	1/2002	Lord
9,098,883 B2	8/2015	Asher et al.	2002/0018477 A1	2/2002	Katz
9,111,417 B2	8/2015	Leen et al.	2002/0026321 A1	2/2002	Faris
9,205,339 B2	12/2015	Cibula et al.	2002/0029381 A1	3/2002	Inselberg
9,233,293 B2	1/2016	Lockton	2002/0035609 A1	3/2002	Lessard
9,258,601 B2	2/2016	Lockton et al.	2002/0037766 A1	3/2002	Muniz
9,270,789 B2	2/2016	Huske et al.	2002/0069265 A1	3/2002	Bountour
9,289,692 B2	3/2016	Barber	2002/0042293 A1	4/2002	Ubale et al.
9,306,952 B2	4/2016	Burman et al.	2002/0046099 A1	4/2002	Frengut et al.
9,314,686 B2	4/2016	Lockton	2002/0054088 A1	5/2002	Tanskanen et al.
9,314,701 B2	4/2016	Lockton et al.	2002/0055385 A1	5/2002	Otsu
9,355,518 B2	5/2016	Amaitis et al.	2002/0056089 A1	5/2002	Houston
9,406,189 B2	8/2016	Scott et al.	2002/0059094 A1	5/2002	Hosea et al.
9,430,901 B2	8/2016	Amaitis et al.	2002/0059623 A1	5/2002	Rodriguez et al.
9,457,272 B2	10/2016	Lockton et al.	2002/0069076 A1	6/2002	Faris
9,498,724 B2	11/2016	Lockton et al.	2002/0076084 A1	6/2002	Tian
9,501,904 B2	11/2016	Lockton	2002/0078176 A1	6/2002	Nomura et al.
9,504,922 B2	11/2016	Lockton et al.	2002/0083461 A1	6/2002	Hutcheson
9,511,287 B2	12/2016	Lockton et al.	2002/0091833 A1	7/2002	Grimm
9,526,991 B2	12/2016	Lockton et al.	2002/0094869 A1	7/2002	Harkham
9,536,396 B2	1/2017	Amaitis et al.	2002/0095333 A1	7/2002	Jokinen et al.
9,556,991 B2	1/2017	Furuya	2002/0097983 A1	7/2002	Wallace et al.
9,604,140 B2	3/2017	Lockton et al.	2002/0099709 A1	7/2002	Wallace
9,652,937 B2	5/2017	Lockton	2002/0100063 A1	7/2002	Herigstad et al.
9,662,576 B2	5/2017	Lockton et al.	2002/0103696 A1	8/2002	Huang et al.
9,662,577 B2	5/2017	Lockton et al.	2002/0105535 A1	8/2002	Wallace et al.
9,672,692 B2	6/2017	Lockton	2002/0107073 A1	8/2002	Binney
9,687,738 B2	6/2017	Lockton et al.	2002/0108112 A1	8/2002	Wallace et al.
9,687,739 B2	6/2017	Lockton et al.	2002/0108125 A1	8/2002	Joao
9,707,482 B2	7/2017	Lockton et al.	2002/0108127 A1	8/2002	Lew et al.
9,716,918 B1	7/2017	Lockton et al.	2002/0112249 A1	8/2002	Hendricks et al.
9,724,603 B2	8/2017	Lockton et al.	2002/0115488 A1	8/2002	Berry et al.
9,744,453 B2	8/2017	Lockton et al.	2002/0119821 A1	8/2002	Sen
9,805,549 B2	10/2017	Asher et al.	2002/0120930 A1	8/2002	Yona
9,821,233 B2	11/2017	Lockton et al.	2002/0124247 A1	9/2002	Houghton
9,878,243 B2	1/2018	Lockton et al.	2002/0132614 A1	9/2002	Vanlujit et al.
9,881,337 B2	1/2018	Jaycob et al.	2002/0133817 A1	9/2002	Markel
9,901,820 B2	2/2018	Lockton et al.	2002/0133827 A1	9/2002	Newman et al.
9,908,053 B2	3/2018	Lockton et al.	2002/0142843 A1	10/2002	Roelofs
9,919,210 B2	3/2018	Lockton	2002/0144273 A1	10/2002	Reto
9,919,211 B2	3/2018	Lockton et al.	2002/0147049 A1	10/2002	Carter, Sr.
9,919,221 B2	3/2018	Lockton et al.	2002/0157002 A1	10/2002	Messerges et al.
9,978,217 B2	5/2018	Lockton	2002/0157005 A1	10/2002	Bunk
9,993,730 B2	6/2018	Lockton et al.	2002/0159576 A1	10/2002	Adams
9,999,834 B2	6/2018	Lockton et al.	2002/0162031 A1	10/2002	Levin et al.
10,052,557 B2	8/2018	Lockton et al.	2002/0162117 A1	10/2002	Pearson
10,089,815 B2	10/2018	Asher et al.	2002/0165020 A1	11/2002	Koyama
10,096,210 B2	10/2018	Amaitis et al.	2002/0165025 A1	11/2002	Kawahara
10,137,369 B2	11/2018	Lockton et al.	2002/0177483 A1	11/2002	Cannon
			2002/0184624 A1	12/2002	Spencer
			2002/0187825 A1	12/2002	Tracy
			2002/0198050 A1	12/2002	Patchen
			2003/0002638 A1	1/2003	Kaars

US 11,338,189 B2

(56)

References Cited

U.S. PATENT DOCUMENTS

2003/0003997	A1	1/2003	Vuong et al.	2005/0028208	A1	2/2005	Ellis
2003/0013528	A1	1/2003	Allibhoy et al.	2005/0043094	A1	2/2005	Nguyen et al.
2003/0023547	A1	1/2003	France	2005/0076371	A1	4/2005	Nakamura
2003/0040363	A1	2/2003	Sandberg	2005/0077997	A1	4/2005	Landram
2003/0054885	A1	3/2003	Pinto et al.	2005/0060219	A1	5/2005	Ditering et al.
2003/0060247	A1	3/2003	Goldberg et al.	2005/0097599	A1	5/2005	Potnick et al.
2003/0066089	A1	4/2003	Anderson	2005/0101309	A1	5/2005	Croome
2003/0069828	A1	4/2003	Blazey et al.	2005/0113164	A1	5/2005	Buecheler et al.
2003/0070174	A1	4/2003	Solomon	2005/0003878	A1	6/2005	Updike
2003/0078924	A1	4/2003	Liechty et al.	2005/0131984	A1	6/2005	Hofmann et al.
2003/0086691	A1	5/2003	Yu	2005/0138668	A1	6/2005	Gray et al.
2003/0087652	A1	5/2003	Simon et al.	2005/0144102	A1	6/2005	Johnson
2003/0088648	A1	5/2003	Bellaton	2005/0155083	A1	7/2005	Oh
2003/0114224	A1	6/2003	Anttila et al.	2005/0177861	A1	8/2005	Ma et al.
2003/0115152	A1	6/2003	Flaherty	2005/0210526	A1	9/2005	Levy et al.
2003/0125109	A1	7/2003	Green	2005/0216838	A1	9/2005	Graham
2003/0134678	A1	7/2003	Tanaka	2005/0235043	A1	10/2005	Teodosiu et al.
2003/0144017	A1	7/2003	Inselberg	2005/0239551	A1	10/2005	Griswold
2003/0154242	A1	8/2003	Hayes et al.	2005/0255901	A1	11/2005	Kreutzer
2003/0165241	A1	9/2003	Fransdonk	2005/0256895	A1	11/2005	Dussault
2003/0177167	A1	9/2003	Lafage et al.	2005/0266869	A1	12/2005	Jung
2003/0177504	A1	9/2003	Paulo et al.	2005/0267969	A1	12/2005	Poikselka et al.
2003/0189668	A1	10/2003	Newman et al.	2005/0273804	A1	12/2005	Preisman
2003/0195023	A1	10/2003	Di Cesare	2005/0283800	A1	12/2005	Ellis et al.
2003/0195807	A1	10/2003	Maggio	2005/0288080	A1	12/2005	Lockton et al.
2003/0208579	A1	11/2003	Brady et al.	2005/0288101	A1	12/2005	Lockton et al.
2003/0211856	A1	11/2003	Zilliacus	2005/0288812	A1	12/2005	Cheng
2003/0212691	A1	11/2003	Kuntala et al.	2006/0020700	A1	1/2006	Qiu
2003/0216185	A1	11/2003	Varley	2006/0025070	A1	2/2006	Kim et al.
2003/0216857	A1	11/2003	Feldman et al.	2006/0046810	A1	3/2006	Tabata
2003/0228866	A1	12/2003	Pezeshki	2006/0047772	A1	3/2006	Crutcher
2003/0233425	A1	12/2003	Lyons et al.	2006/0053390	A1	3/2006	Gariepy-Viles
2004/0005919	A1	1/2004	Walker et al.	2006/0058103	A1	3/2006	Danieli
2004/0014524	A1	1/2004	Pearlman	2006/0059161	A1	3/2006	Millett et al.
2004/0015442	A1	1/2004	Hmlinen	2006/0063590	A1	3/2006	Abassi et al.
2004/0022366	A1	2/2004	Ferguson et al.	2006/0082068	A1	4/2006	Patchen
2004/0025190	A1	2/2004	McCalla	2006/0087585	A1	4/2006	Seo
2004/0056897	A1	3/2004	Ueda	2006/0089199	A1	4/2006	Jordan et al.
2004/0060063	A1	3/2004	Russ et al.	2006/0094409	A1	5/2006	Inselberg
2004/0073915	A1	4/2004	Dureau	2006/0101492	A1	5/2006	Lowcock
2004/0088729	A1	5/2004	Petrovic et al.	2006/0111168	A1	5/2006	Nguyen
2004/0093302	A1	5/2004	Baker et al.	2006/0135253	A1	6/2006	George et al.
2004/0152454	A1	5/2004	Kauppinen	2006/0148569	A1	7/2006	Beck
2004/0107138	A1	6/2004	Maggio	2006/0156371	A1	7/2006	Maetz et al.
2004/0117831	A1	6/2004	Ellis et al.	2006/0160597	A1*	7/2006	Wright G07F 17/32
2004/0117839	A1	6/2004	Watson et al.				463/16
2004/0125877	A1	7/2004	Chang	2006/0174307	A1	8/2006	Hwang et al.
2004/0128319	A1	7/2004	Davis et al.	2006/0183547	A1	8/2006	McMonigle
2004/0139158	A1	7/2004	Datta	2006/0183548	A1	8/2006	Morris et al.
2004/0139482	A1	7/2004	Hale	2006/0190654	A1	8/2006	Joy
2004/0148638	A1	7/2004	Weisman et al.	2006/0205483	A1	9/2006	Meyer et al.
2004/0152517	A1	8/2004	Haedisty	2006/0205509	A1	9/2006	Hirota
2004/0152519	A1	8/2004	Wang	2006/0205510	A1	9/2006	Lauper
2004/0158855	A1	8/2004	Gu et al.	2006/0217198	A1	9/2006	Johnson
2004/0162124	A1	8/2004	Barton et al.	2006/0236352	A1	10/2006	Scott, III
2004/0166873	A1	8/2004	Simic	2006/0248553	A1	11/2006	Mikkelsen et al.
2004/0176162	A1	9/2004	Rothschild	2006/0248564	A1	11/2006	Zinevitch
2004/0178923	A1	9/2004	Kuang	2006/0256865	A1	11/2006	Westerman
2004/0183824	A1	9/2004	Benson	2006/0256868	A1	11/2006	Westerman
2004/0185881	A1	9/2004	Lee	2006/0269120	A1	11/2006	Mehmadi et al.
2004/0190779	A1	9/2004	Sarachik et al.	2006/0285586	A1	12/2006	Westerman
2004/0198495	A1	10/2004	Cisneros et al.	2007/0004516	A1	1/2007	Jordan et al.
2004/0201626	A1	10/2004	Lavoie	2007/0013547	A1	1/2007	Boaz
2004/0203667	A1	10/2004	Shroder	2007/0019826	A1	1/2007	Horbach et al.
2004/0203898	A1	10/2004	Bodin et al.	2007/0028272	A1	2/2007	Lockton
2004/0210507	A1	10/2004	Asher et al.	2007/0037623	A1	2/2007	Romik
2004/0215756	A1	10/2004	VanAntwerp	2007/0054695	A1	3/2007	Huske et al.
2004/0216161	A1	10/2004	Barone, Jr. et al.	2007/0078009	A1	4/2007	Lockton et al.
2004/0216171	A1	10/2004	Barone, Jr. et al.	2007/0083920	A1	4/2007	Mizoguchi et al.
2004/0224750	A1	11/2004	Ai-Ziyoud	2007/0086465	A1	4/2007	Paila et al.
2004/0242321	A1	12/2004	Overton	2007/0087832	A1	4/2007	Abbott
2004/0266513	A1	12/2004	Odom	2007/0093296	A1	4/2007	Asher
2005/0005303	A1	1/2005	Barone, Jr. et al.	2007/0101358	A1	5/2007	Ambady
2005/0021942	A1	1/2005	Diehl et al.	2007/0106721	A1	5/2007	Schloter
2005/0026699	A1	2/2005	Kinzer et al.	2007/0107010	A1	5/2007	Jolna et al.
				2007/0129144	A1	6/2007	Katz
				2007/0147870	A1	7/2007	Nagashima et al.
				2007/0162328	A1	7/2007	Reich
				2007/0183744	A1	8/2007	Koizumi

(56)

References Cited

U.S. PATENT DOCUMENTS

2007/0197247	A1	8/2007	Inselberg
2007/0210908	A1	9/2007	Putterman et al.
2007/0219856	A1	9/2007	Ahmad-Taylor
2007/0222652	A1	9/2007	Cattone et al.
2007/0226062	A1	9/2007	Hughes et al.
2007/0238525	A1	10/2007	Suomela
2007/0243936	A1	10/2007	Binenstock et al.
2007/0244570	A1	10/2007	Speiser et al.
2007/0244585	A1	10/2007	Speiser et al.
2007/0244749	A1	10/2007	Speiser et al.
2007/0265089	A1	11/2007	Robarts
2007/0294410	A1	12/2007	Pandya
2008/0005037	A1	1/2008	Hammad
2008/0013927	A1	1/2008	Kelly et al.
2008/0051201	A1	2/2008	Lore
2008/0066129	A1	3/2008	Katcher et al.
2008/0076497	A1	3/2008	Kiskis et al.
2008/0104630	A1	5/2008	Bruce
2008/0146337	A1	6/2008	Halonen
2008/0169605	A1	7/2008	Shuster et al.
2008/0222672	A1	9/2008	Piesing
2008/0240681	A1	10/2008	Fukushima
2008/0248865	A1	10/2008	Tedesco
2008/0270288	A1	10/2008	Butterly et al.
2008/0288600	A1	11/2008	Clark
2009/0011781	A1	1/2009	Merrill et al.
2009/0094632	A1	4/2009	Newman et al.
2009/0103892	A1	4/2009	Hirayama
2009/0186676	A1	7/2009	Amaitis et al.
2009/0163271	A1	9/2009	George et al.
2009/0228351	A1	9/2009	Rijsenbrij
2009/0234674	A1	9/2009	Wurster
2009/0264188	A1	10/2009	Soukup
2009/0271512	A1	10/2009	Jorgensen
2009/0325716	A1	12/2009	Harari
2010/0099421	A1	4/2010	Patel et al.
2010/0099471	A1	4/2010	Feeney et al.
2010/0107194	A1	4/2010	McKissick et al.
2010/0120503	A1	5/2010	Hoffman et al.
2010/0137057	A1	6/2010	Fleming
2010/0203936	A1	8/2010	Levy
2010/0279764	A1	11/2010	Allen et al.
2010/0296511	A1	11/2010	Prodan
2011/0016224	A1	1/2011	Riley
2011/0053681	A1	3/2011	Goldman
2011/0065490	A1	3/2011	Lutnick
2011/0081958	A1	4/2011	Herman
2011/0116461	A1	5/2011	Holt
2011/0130197	A1	6/2011	Bythar et al.
2011/0227287	A1	9/2011	Reabe
2011/0269548	A1	11/2011	Barclay et al.
2011/0306428	A1	12/2011	Lockton et al.
2012/0058808	A1	3/2012	Lockton
2012/0115585	A1	5/2012	Goldman
2012/0157178	A1	6/2012	Lockton
2012/0264496	A1	10/2012	Behrman et al.
2012/0282995	A1	11/2012	Allen et al.
2012/0295686	A1	11/2012	Lockton
2013/0005453	A1	1/2013	Nguyen et al.
2013/0072271	A1	3/2013	Lockton et al.
2013/0079081	A1	3/2013	Lockton et al.
2013/0079092	A1	3/2013	Lockton et al.
2013/0079093	A1	3/2013	Lockton et al.
2013/0079135	A1	3/2013	Lockton et al.
2013/0079150	A1	3/2013	Lockton et al.
2013/0079151	A1	3/2013	Lockton et al.
2013/0196774	A1	8/2013	Lockton et al.
2013/0225285	A1	8/2013	Lockton
2013/0225299	A1	8/2013	Lockton
2014/0031134	A1	1/2014	Lockton et al.
2014/0100011	A1	4/2014	Gingher
2014/0106832	A1	4/2014	Lockton et al.
2014/0128139	A1	5/2014	Shuster et al.
2014/0155130	A1	6/2014	Lockton et al.
2014/0155134	A1	6/2014	Lockton

2014/0206446	A1	7/2014	Lockton et al.	
2014/0237025	A1	8/2014	Huske et al.	
2014/0248952	A1	9/2014	Cibula et al.	
2014/0256432	A1	9/2014	Lockton et al.	
2014/0279439	A1	9/2014	Brown	
2014/0287832	A1	9/2014	Lockton et al.	
2014/0309001	A1	10/2014	Root	
2014/0335961	A1	11/2014	Lockton et al.	
2014/0335962	A1	11/2014	Lockton et al.	
2014/0378212	A1	12/2014	Sims	
2015/0011310	A1	1/2015	Lockton et al.	
2015/0024814	A1	1/2015	Root	
2015/0067732	A1	3/2015	Howe et al.	
2015/0148130	A1	5/2015	Cibula et al.	
2015/0238839	A1	8/2015	Lockton	
2015/0238873	A1	8/2015	Arnone et al.	
2015/0258452	A1 *	9/2015	Lockton	A63F 13/537 463/7
2015/0356831	A1	12/2015	Osibodu	
2016/0023116	A1	1/2016	Wire	
2016/0045824	A1	2/2016	Lockton et al.	
2016/0049049	A1 *	2/2016	Lockton	A63F 13/795 463/11
2016/0054872	A1	2/2016	Cibula et al.	
2016/0082357	A1	3/2016	Lockton	
2016/0121208	A1	5/2016	Lockton et al.	
2016/0134947	A1	5/2016	Huske et al.	
2016/0217653	A1	7/2016	Meyer	
2016/0271501	A1	9/2016	Balsbaugh	
2016/0361647	A1	12/2016	Lockton et al.	
2016/0375362	A1	12/2016	Lockton et al.	
2017/0036110	A1	2/2017	Lockton et al.	
2017/0036117	A1	2/2017	Lockton et al.	
2017/0043259	A1	2/2017	Lockton et al.	
2017/0053498	A1	2/2017	Lockton	
2017/0065891	A1	3/2017	Lockton et al.	
2017/0098348	A1	4/2017	Odom	
2017/0103615	A1	4/2017	Theodosopoulos	
2017/0128840	A1	5/2017	Croci	
2017/0221314	A1	8/2017	Lockton	
2017/0225071	A1	8/2017	Lockton et al.	
2017/0225072	A1	8/2017	Lockton et al.	
2017/0232340	A1	8/2017	Lockton	
2017/0243438	A1	8/2017	Merati	
2017/0249801	A1	8/2017	Malek	
2017/0252649	A1	9/2017	Lockton et al.	
2017/0259173	A1	9/2017	Lockton et al.	
2017/0264961	A1	9/2017	Lockton	
2017/0282067	A1	10/2017	Lockton et al.	
2017/0296916	A1	10/2017	Lockton et al.	
2017/0304726	A1	10/2017	Lockton et al.	
2017/0345260	A1	11/2017	Strause	
2018/0025586	A1	1/2018	Lockton	
2018/0071637	A1	3/2018	Baazov	
2018/0104582	A1	4/2018	Lockton et al.	
2018/0104596	A1	4/2018	Lockton et al.	
2018/0117464	A1	5/2018	Lockton et al.	
2018/0140955	A1	5/2018	Lockton et al.	
2018/0154255	A1	6/2018	Lockton	
2018/0169523	A1	6/2018	Lockton et al.	
2018/0190077	A1	7/2018	Hall	
2018/0236359	A1	8/2018	Lockton et al.	
2018/0243652	A1	8/2018	Lockton et al.	
2018/0264360	A1	9/2018	Lockton et al.	
2018/0300988	A1	10/2018	Lockton	
2018/0318710	A1	11/2018	Lockton et al.	
2019/0054375	A1	2/2019	Lockton et al.	
2019/0060750	A1	2/2019	Lockton et al.	
2019/0143225	A1 *	5/2019	Baazov	A63F 13/35 463/25

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102	A3 6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999

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(56)

References Cited

FOREIGN PATENT DOCUMENTS

JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01/039506 A2	5/2001
WO	01/65743 A1	9/2001
WO	02/03698 A1	10/2002
WO	2005064506 A1	7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007
WO	2007016575	2/2007
WO	2007041667	4/2007
WO	2008027811 A2	3/2008
WO	2008115858 A1	9/2008

OTHER PUBLICATIONS

Ark 4.0 Standard Edition, Technical Overview www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

“Understanding the Interactivity Between Television and Mobile commerce”, Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

“Re: Multicast Based Voting System” www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.

“IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim”, www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

“Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti”, www.woodworm.cs.uml.edu/rprice/ep/henderson.

“SMS Based Voting and Survey System for Meetings”, www.abbit.be/technology/SMSSURVEY.html.

“PurpleAce Launches 3GSM Ringtone Competition”, www.wirelessdevnet.com/news/2005/jan/31/news6.html.

“On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel”, Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM ’91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, “Game” definition, <<http://www.merriam-webster.com/dictionary/agme.pg.1>.

Ducheneaut et al., “The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game”, Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369. <http://help.yahoo.com/help/us/tourn/tourn-03.html>.

International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Pinnacle, “The basics of reverse line movement,” Jan. 19, 2018, Retrieved on Jan. 22, 2020 , <http://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQSS7M3GD>.

Gambling Commission,“Virtual currencies, eSports and social casino gaming-position paper,” Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.

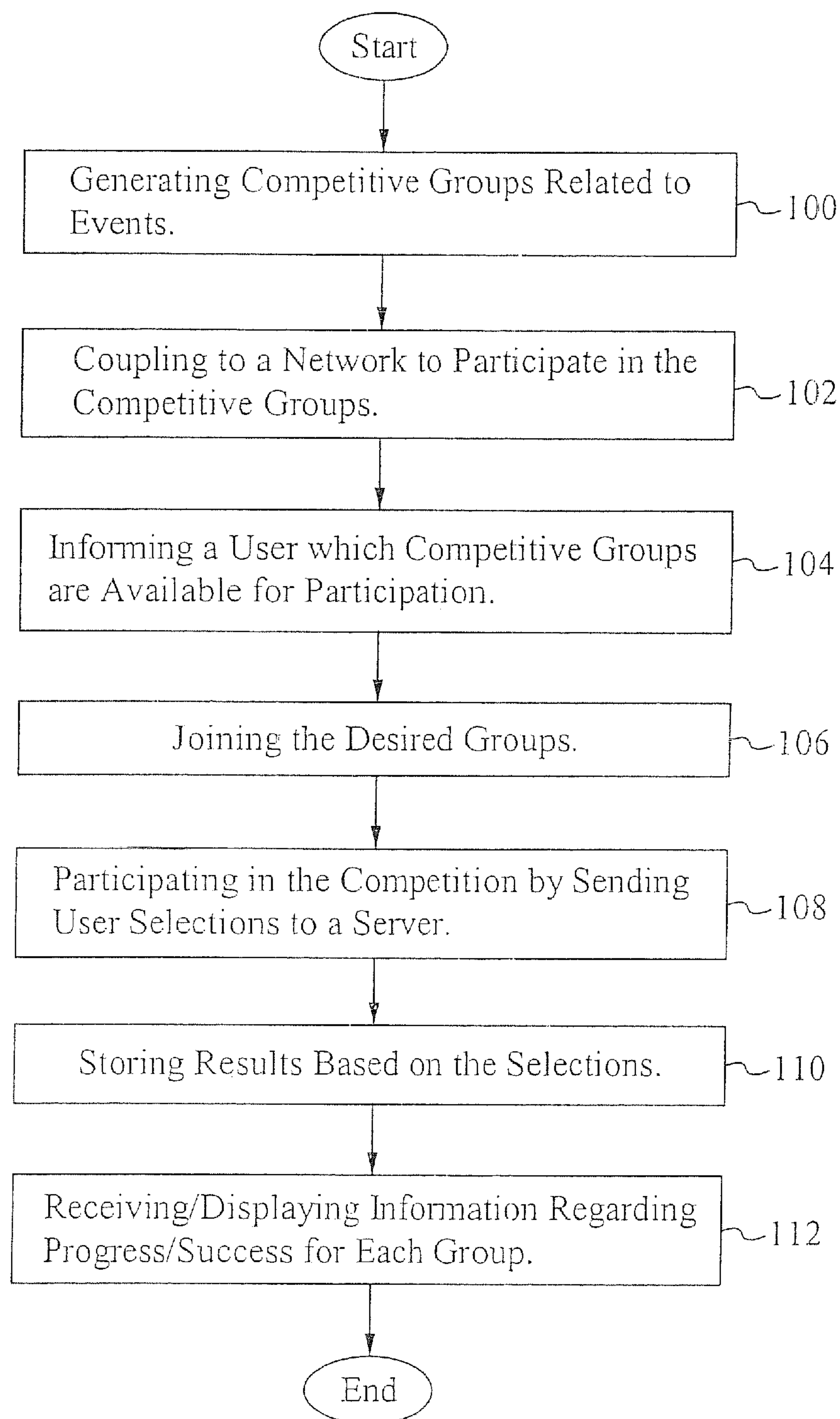
Sipko et al.,“Machine learning for the prediction of professional tennis matches,” In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.

WinView Game Producer, “Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season,” In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , <http://www.winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.

International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

Fantasy sport-Wikipedia.pdf, https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015).

* cited by examiner

**Fig. 1**

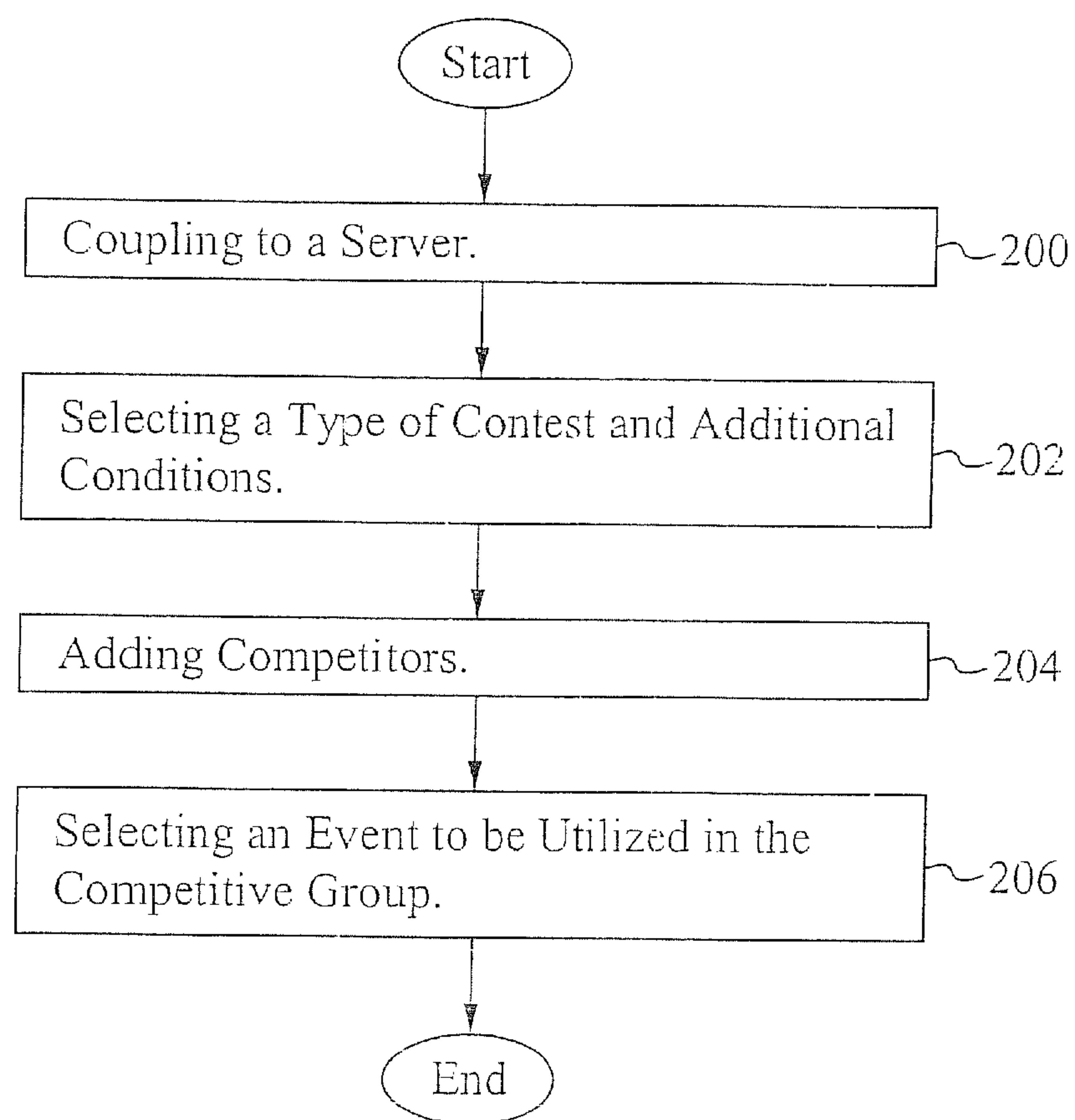


Fig. 2

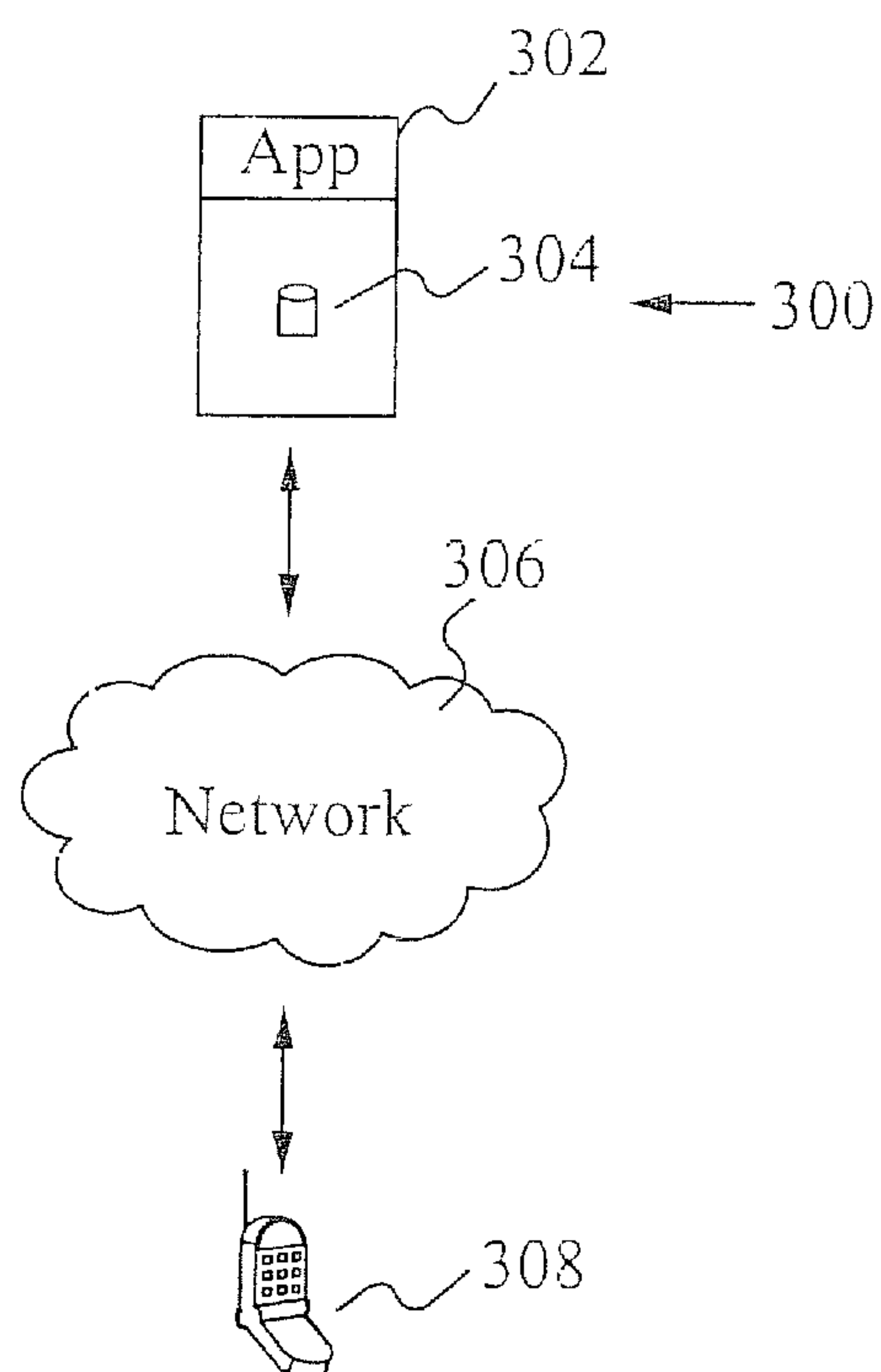


Fig. 3

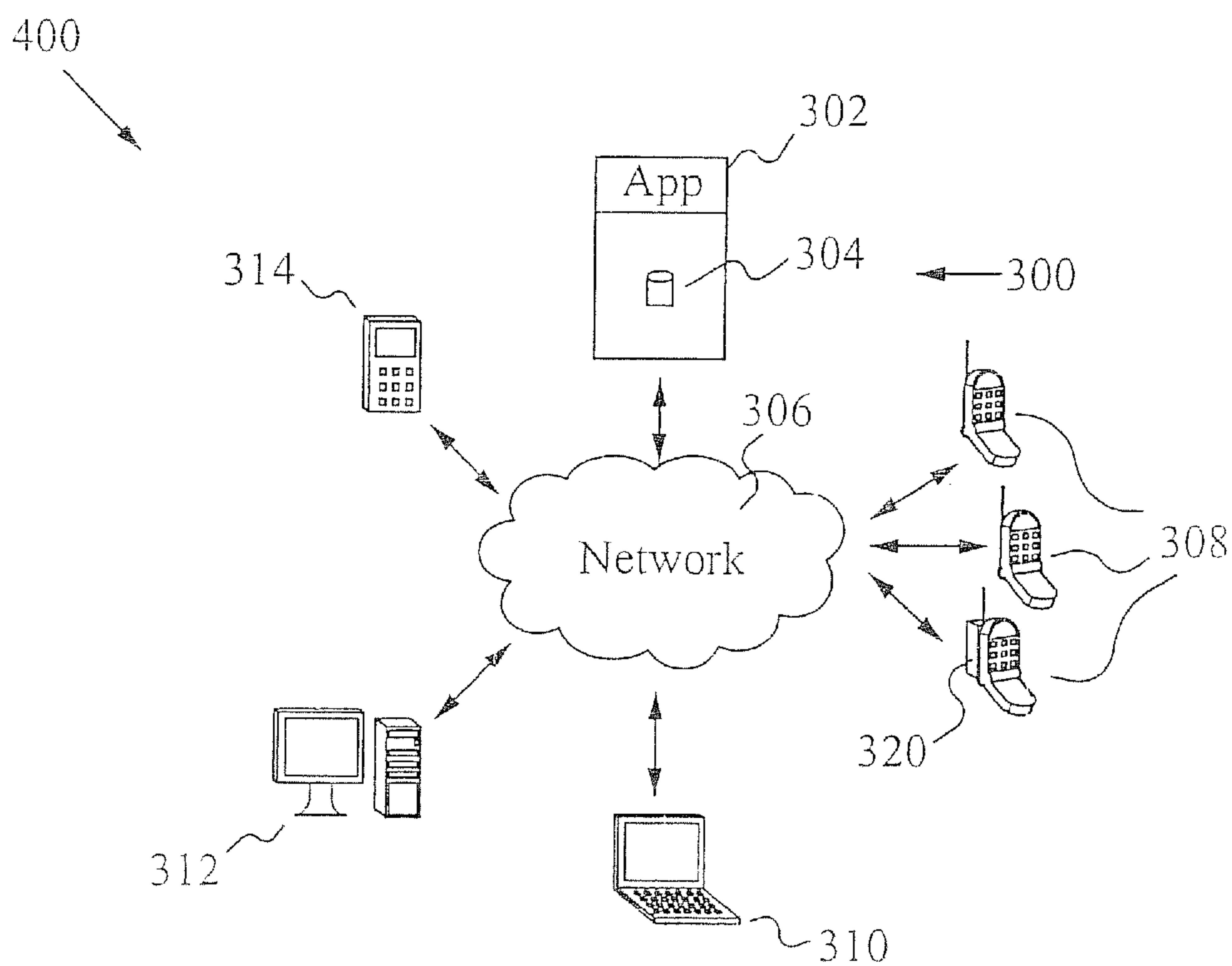


Fig. 4

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**METHOD OF AND SYSTEM FOR
CONDUCTING MULTIPLE CONTESTS OF
SKILL WITH A SINGLE PERFORMANCE**

RELATED APPLICATION(S)

This Patent Application is a continuation of co-pending U.S. patent application Ser. No. 16/221,307, filed Dec. 14, 2018, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 15/485,145, filed Apr. 11, 2017, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/927,227, filed Oct. 29, 2015, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/706,802, filed May 7, 2015, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 13/246,464, filed Sep. 27, 2011, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation-in-part of U.S. patent application Ser. No. 13/215,052, filed Aug. 22, 2011, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 11/652,240, filed Jan. 10, 2007, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which claims priority under 35 U.S.C. § 119(e) of the, co-owned U.S. Provisional Patent Application No. 60/757,960, filed Jan. 10, 2006, and titled "METHOD-
OLOGY FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE," and which are all also hereby incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels

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together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

SUMMARY OF THE INVENTION

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of the availability of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated for each competition group, so that users continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

In one aspect, a method of participating in multiple contests of skill corresponding to an event programmed in a device. The method comprises receiving a list of competitive groups to join, selecting a plurality of competitive groups to join, participating with the plurality of competitive groups by sending selections related to the event to a server and receiving standings on a device from the server, wherein the standings are based on results from the selections. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show, and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. Receiving the standings on the device occurs during participating with the plurality of

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competitive groups. The standings are separated based on the plurality of competitive groups. The standings are received periodically and represent relative performance in the separate competitive groups. The competitive groups are selected from the group consisting of service provider generated competitive groups and user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The user generated competitive groups includes contacts on a social networking site. The list of competitive groups to join is received on the device selected from the group consisting of a cellular phone, a laptop computer, a personal computer, PDA and a tablet computer. The competitive groups are maintained in a database. In some embodiments, the results are adjusted using a handicap by providing additional points to users in lower level groups. In some embodiments, the method is implemented using HTML5 or a native application.

In another aspect, a method of conducting multiple contests of skill corresponding to an event programmed in a device. The method comprises generating separate competitive groups related to the event, coupling to a network to participate in the competitive groups, informing a user which of the competitive groups are available for the user to join, joining a selected number of the competitive groups, participating with the competitive groups by sending selections related to the event to a server within the network, storing results and standings on the server, wherein the standings are based on the results and the results are based on the selections and transmitting the standings to a device. A user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group. The method further comprises displaying the standings on the device. The server contains an application and a database for assisting in generating the competitive group. The application includes a graphical user interface. The device contains an application for assisting in generating the competitive group. Generating competitive groups related to the event further comprises coupling to the server, selecting a type of contest and additional conditions to be included in the competitive group, adding competitors to the competitive group and selecting the event for competition by the competitive group. The type of contest is selected from the group consisting of an open contest, a head-to-head contest and a team contest. Adding competitors to the competitive group includes identifying the competitors by an identifier selected from the group consisting of a username, an email address, a cellular phone number and a personal identifier. The method further comprises sending an invitation which informs the competitors of an opportunity to be included in the competitive group. The invitation is sent by a mechanism selected from the group consisting of an email, an SMS text message and a voice message. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. Transmitting the standings occurs during participating with the competitive groups. The standings are separated based on the competitive groups. The standings are received periodically and represent performance within the competitive groups. The competitive groups are selected from the group consisting of service provider generated competitive groups and user generated competitive groups. The service provider generated competitive groups are based

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on general playing characteristics. The user generated competitive groups include contacts on a social networking site. The device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer, PDA and a tablet computer. The competitive groups are maintained in a database. The results are adjusted using a handicap by providing additional points to users in lower level groups. In some embodiments, the method is implemented using HTML5 or a native application.

In another aspect, a server device for conducting multiple contests of skill corresponding to an event comprises a storage mechanism and an application for interacting with the storage mechanism to generate and store competitive groups which are used to compete in the multiple contests of skill, the application further for receiving selections related to the event, storing results and standings based on the selections, wherein the standings are based on the results and transmitting the standings to the device. The application is further for providing an interface for generating competitive groups related to the event. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. The server device communicates data for generating the competitive groups, for selecting the competitive groups to join and for submitting the selections. The standings are transmitted periodically to the device and represent performance within the competitive groups. The standings are separated based on the competitive groups. A network identifies the competitive groups a user is eligible for. The server device further comprises a database stored on the server device for managing the selections, the results, the standings and the competitive groups. The results are adjusted using a handicap by providing additional points to users in lower level groups.

In yet another aspect, a device for participating in multiple contests of skill corresponding to an event comprises a communications module for coupling to a server and an application for utilizing the communications module for coupling to a server to communicate with the server to generate competitive groups which are used to compete in the multiple contests of skill. The application utilizes the communications module for coupling to the server to send selections to and receive standings from the server. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. The competitive groups comprise user generated competitive groups including contacts on a social networking site. In some embodiments, the device and the server implement HTML5.

In another aspect, a method programmed in a memory of a device comprises generating a list of competitive groups to join and presenting the list of competitive groups to join, wherein the list of competitive groups are for participating in multiple contests of skill corresponding to an event. Users are provided a currency for watching the event or participating in the multiple contests of skill. The currency is redeemable for prizes or services. Each group pools the currency received by users and the currency is distributed to a member of each group. The member is chosen at random. The member is chosen based on skill. Participants in a group of the competitive groups pool sweepstakes entries together and divide a resulting award from the sweepstakes among the participants of the group. A game of skill is synchronized

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with the event. The game of skill is synchronized with the event using watermarking or fingerprinting. The multiple contests of skill are generated by users using a template. Promotional awards are awarded for participating. Frequent player points are offered for participating. Users are able to invite other user to a contest of the multiple contests of skill through a social networking site. A user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of a process of utilizing the present invention.

FIG. 2 illustrates a flowchart of a process of generating a user generated competition group.

FIG. 3 illustrates a graphical representation of an embodiment of the present invention.

FIG. 4 illustrates a graphical representation of a network of devices.

DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENT

A method and system for conducting a variety of competitions simultaneously are described herein. The organization of competition in a game of skill has previously taken one of three basic formats:

1) Open contests: where large numbers of players enter an event, and all of the entrants are competing against each other for a single prize pool.

2) Head-to-head: where competitors are matched between a relatively small number of players identified to compete head-to-head against each other. The actual match making occurs in many forms, such as match play or elimination tournaments.

3) Team competitions: where two or more people are teamed to compete in head-to-head elimination against other similar sized teams in match play or total score competitions.

The present invention is a system and method allowing participants to simultaneously compete in multiple contests based on a single performance. For example, a user is able to participate in an open contest, compete in a team competition, and also compete against a small group of friends all utilizing a score achieved in the same event.

As a comparison, in tournaments held for bowling or golf, players are able to compete simultaneously in a gross score tournament as well as a net (handicap) tournament with the same performance. However, the contestants in the gross and net competitions are identical. The focus of the present invention is on enabling the entry of an individual in separate competitions, with separate prizes based on their single performance (score), where the pool of entrants is different for each competition.

The default mechanism for organizing a competition for this type of game in the past has been an open contest where all competitors are automatically entered in a contest against all other players. As taught in U.S. Pat. No. 5,813,913, incorporated herein by reference, the competitive field of players is also able to be divided into separate flights or groups according to skill and experience and only scores from other competitions at the same skill level are compared. Thousands of players are able to compete in a particular football game within a particular skill level.

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For this example, Player A has been rated as an “intermediate” player and is competing against 10,000 other “intermediate” players in an interactive game of skill played with a live Monday Night Football broadcast. Prior to the telecast, Player A has arranged a side competition against four of his friends. Player B has organized through a match-making interface, a small competition which includes Players A, B, C, D and E. In this example, Players A and B are intermediate players, but Players C, D and E are novice players. Player B has also organized this small competition to require a \$2.00 entry fee with a winner-takes-all rule. While none of the competitions require prizes or awards, they are allowable in games of skill.

When Player A logs on to a network supporting mobile games of skill, he is presented with the option of competing in the private separate contest that Player B set up. Player A agrees to compete with the \$2.00 entry fee.

Separately, Player A has previously registered to participate in a sponsored season long team competition with coworkers F, G and H. The highest two scores of their four man team are totaled, and these points are added to the season’s cumulative score with the highest team scores winning prizes. Thus, for a single football game, Player A is registered in: an open competition where the best competitors win prizes, a friendly competition for a prize pool of \$10, and a season long team competition.

During the football game, Player A, like all of the other players, tries to get the best possible score by predicting the plays correctly before they happen. He plays in the same manner he would playing in the open contest alone, but his performance is in fact simultaneously separately scored in these completely different competitions against a different set of opponents for different rewards.

At the end of the event, Player A scored 12,565 points, in this example. That score was in the 92nd percentile among the 10,000 intermediate players, but not high enough to win an award in that contest. That same score of 12,565 was also compared against Players B, C, D and E, and was the highest score, so Player A won the separate competition of \$10. At the same time, Player A’s score was the second highest among his team members in the separate team competition, and therefore was one which was totaled for the season long team competition.

It is essential to the success and enjoyment of such an invention that a potential competitor have an easy method of registering and entering these separate competitions on an ad hoc or seasonal basis. In addition, it is important to the success of such a system that all of the competitors be able to monitor periodically, not only their ongoing standings in the overall open competition at their skill level, but they will be able to periodically review all the competitions they are entered into to see the current standings.

For each of these competitions, there are two ways the group of attendees are able to be formed: A) organized by the service provider and/or a commercial sponsor or B) organized by the users themselves. Examples of service provider generated groups include those based on competitive skill level and region. For example, all intermediate players for a specific football game. An example of a user generated group is identifying five friends for a football competition. As each player enters a particular event (e.g. Monday Night Football), they are informed of the competitions they are playing in (e.g. Intermediate Global competition, the California Bay Area competition, and the personal Group competition). Each group is able to have a generic name and/or a specific name such as “personal group competition 1” or “Bob’s Competition.” When a player’s phone or computing

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device establishes a connection with the network (e.g. the Airplay Network), the network identifies all of the groups that this player is able to compete in, and the server will upload this information to the phone over a cellular connection for display to the user. When a user couples to the network with a computing device other than a cellular phone, the information is available through the Internet. In some embodiments, participation in various group competitions involves additional fees. Users have the ability to choose not to compete in any or all of the groups they have been invited to.

There are two classes of Groups: System Generated Groups (e.g. Service Provider Groups) and User Generated Groups. System Generated Groups are generated by the service administrator based on database information about the user. Examples include Intermediate Skill Level and California Bay Area San Francisco 49ers Fans. User Generated Groups are defined by one or more members. A member is able to generate a group either from the services website or from a cellular phone interface. To generate a group, a member generates a name for the group or a generic name is assigned, and then the member adds other members to the group. The member is able to add other members to the group by their handle (unique identifier), email address (for new members) or by their cellular phone number. Groups are able to be assigned to a particular event. A group is able to be designated as an active group or a party. User group owners generate a party by associating the group to a particular event (e.g. December 12th Monday Night Football Game). In some embodiments, an email invitation or text message is sent to inform the members of the group that they have been invited to a party. In some embodiments, users are able to generate a group by joining together “friends” on social network sites such as Facebook, Twitter, Google+ or any other site. For example, a user is able to select “all Facebook contacts” to invite to join a group.

The game control server maintains a list of groups. Service Provider Groups are automatically assigned to events. User Groups are assigned to events by the group owners. In both cases, a list of active groups is known before the start of the event such as parties for a particular event. Within each of these known groups a list of all the participants is also maintained. This is able to be implemented in several ways. The most common way is via a database manager. This is able to be done through a data structure that is loaded for each event, and a database is one natural implementation to keep track of the group/participant relationships.

Throughout the game, a server manages the scores for every player. The scores are updated in a central location such as a database server, and are sorted with the members of a particular group to identify the rankings for each member in the competition.

During an event, scores and rankings are sent to members of the various groups. This is done after each scoring opportunity, or at a slower pace such as every five minutes or every five scoring opportunities. For small groups (e.g. 20 or less active participants) all of the scores and rankings are able to be sent by the server and displayed on the participant’s device. For very large groups there are two approaches that can be taken: 1) Common message or 2) Individualized message. Sending a common message for large groups is much more efficient on the network, and is able to still provide a significant amount of information. The message is able to contain the top 20 names and scores for this group as well as the score that is required to be in the top 95%, 90%, 85%, . . . 5%. When the client receives this

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message, it determines what percentile the user is in by extrapolating its score between the percentile scores that the user is between. In sending an individual message for a large group, the server would still send the top 20 names and scores as well as the exact percentile that this user falls in.

Each separate tournament is managed effectively. A message is sent from the game server to the individual clients associated with each group. For very large groups, this message is able to be identical for all of those that are receiving the message. Past results tracked on the cell phone and in more detail on the website will track the rankings in each of the different groups associated with an event. A selection of pre-produced audio and visual comments, for example, in the nature of taunts and cheers are able to be selected from a menu and sent to a specific individual or to all competitors in the group.

Games of skill played on the Internet or cellular phones based upon live telecast sporting events, popular game shows or commercials contained within the broadcast are expected to attract a large number of potential competitors. As in all games of skill, there will be a wide variety of experience and talent and many motivations to play. To some, the enjoyment will be competing in open competitions against skilled players to test their medal. For others, it may be just the ability to compete and possibly win against a handful of close friends who share the same passion for the underlying televised event. Others may be more team oriented and derive more enjoyment from participating as a member of the group. The method and systems described herein provide not only the ability for an individual to find a group of competitors and a contest attractive to them, but also allows them to compete in multiple contests simultaneously with the identical performance and with the same investment of time. This increases not only the sense of community, but provides greater opportunities for the satisfaction of beating friends as well as winning prizes.

FIG. 1 illustrates a flowchart of a process of utilizing the present invention. In the step 100, competitive groups are generated related to events. The competitive groups are either system generated or user generated. As described above, a system generated group is generally based on skill level, location or another generic attribute that some users qualify for, while other users do not. A user generated group is selected by a user where participants are added to the group by entering a username, email address, cellular phone number, or another distinguishing identifier. User generated groups typically include groups of friends, co-workers and other groups of people that a user wants to compete with. Any number of system groups and user groups are able to be generated. In addition to determining who is included in the competition, the events being played within the competition are selected. For example, a user is able to set up a Monday Night Football league, wherein every Monday night for the regular season of the NFL, the users within the group compete based on the Monday night game. In some embodiments, the specific games that the users compete in are selected at later dates beyond the initial generation of the group.

In the step 102, users couple to a network (e.g. a social network such as GetGlu, Miso or a network game) to participate in the generated competitions. In the step 104, the users are informed which competitions are available for participation. For example, an intermediate user couples to the network using his cellular phone and is greeted with a list of competitions available for him to join. The list includes, a free open competition for all intermediate players for a specified game, an individual group competition that his

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friend invited him to join also for the same specified game, a team competition that his co-workers wanted him to be a part of where it is a season long tournament which includes the same specified game and another system generated competition also for the same game that costs \$10 to enter with larger prizes available than the free competition. In the step **106**, each user who has coupled to the network joins the groups desired. Continuing with the example above, the user decides to join the free open competition, the friend's competition and the co-worker competition but does not join the \$10 competition.

In the step **108**, the users then participate in the competitions by sending user selections (e.g. predictions) to a server within the network for monitoring, analyzing and determining results based on the selections. Based on the results, standings for each competition are also determined. Using the example above again, although the user joined three different competitions related to a single game, the user competes exactly the same as if he entered in only one of the competitions, since his input is distributed for the three different competitions.

In the step **110**, the results based on the users' selections are stored. The results are stored in a way such that they are easily retrieved for each competition. For example, a storing mechanism such as a database stores the results of Game X for Player A where Player A's score is 1000. In the free open competition, Player A's score was not good enough to win a prize. However, in the friendly competition, it was the highest score, and in the co-worker team competition it was a score usable by the team. Therefore, although the score was not a winning score for one competition, it was a beneficial score in the other two competitions. By competing in multiple competitions for the same game/event, a user's results/score could provide different outcomes depending on the competition. Therefore, the proper associations of each competition and the score are required.

In the step **112**, each user receives the results and/or standings on his cellular phone or computer. The results and/or standings arrive at varying times depending on the setup of the system. The results and/or standings are received or at least accessible after the competition ends. If desired, the results and/or standings are also received throughout the competition such as every five minutes or after a certain number of selections are made. The standings from the results determine who wins at the end of the competition. While displayed during the game, the standings show what position the user is in. The standings are based on the results of the selections made by the users.

FIG. 2 illustrates a flowchart of a process of generating a user generated competition group. In the step **200**, a user couples to a server within a network (e.g. the Airplay Network) storing an application to generate a competition group. In some embodiments, the application is stored on the user's cellular phone instead of or in addition to on the server and is able to utilize HTML5 or use native applications on the user's cellular phone such as Java and Flash, or HTML5. Using HTML5, the processing is performed on the server, and HTML5 allows the browser on the mobile device to appear as an application even though it is a web page. Preferably, the application provides a graphical user interface such as an interactive website for easily generating the competition group. In the step **202**, the user selects the type of competition, such as open, head-to-head or team, in addition to other types of competitions. The user also adds any additional requirements or conditions such as intermediate players only or \$2 entry fee with the winner-take-all. Additionally, the user labels or names the competition

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group. In the step **204**, competitors are added to the competition. The competitors are added based on a username, phone number, email address or another identification mechanism. In the step **206**, either at the initial set up of the competition group or later on, one or more events are selected to be competed in. For example, if a user wants to set up a competition specifically for Super Bowl XLI, he is able to designate that immediately. Or if a user wants to start a week-long competition related to Jeopardy, he is able to do that as well. The user is also able to retain the same group and modify it to generate a second competition. For example, after the Super Bowl XLI competition ends, the user is able to generate another competition with the same group for the NCAA BCS Bowl Championship Game. Users are able to generate as basic or as complex a competition group as desired. As described above, it is able to be for a single event, a variety of events or an entire season of events. Preferably, a database is utilized to organize the competition groups for easy correlation of data.

FIG. 3 illustrates a graphical representation of an embodiment of the present invention. A server **300** contains an application **302** and a storage mechanism **304**. The application **302** is preferably a web application or at least has a web component to enable users to interact with a web graphical user interface to input data and review data. The storage mechanism **304** is utilized for storing selections and results from the selections as well as competition groups. The storage mechanism **304** preferably includes a database for organizing the data including the selections, results, standings and competition groups amongst other data needed for executing the competitions. The server **300** is part of a network **306**. A device **308** couples to the server **300** through the network **306**. In some embodiments the network **306** includes the Internet. In some embodiments, the network **306** includes a cellular network. Also, in some embodiments, the network **306** includes both the Internet and a cellular network. The device **308** is selected from a cellular phone, a PDA, a computer, a laptop, a smart phone (e.g. an iPhone®), a tablet (e.g. an iPad®), or any other device capable of communicating with the server **300**. As described above, in some embodiments, an application for allowing users to generate competition groups, input selections and communicate with the server in general is included in the device **308** instead of or in addition to the application **302** on the server **300**.

FIG. 4 illustrates a graphical representation of a network of devices. As described above, the server **300** contains the application **302** and the storage mechanism **304** for inputting and outputting data related to the competitions. The device **308**, couples to the network through a network **306**. As described above, the network includes either the Internet, a cellular network or both. Although the device **308** is able to be a device other than a cellular phone as shown, other devices are also shown coupled to the network **306** therefore forming a network of devices **400**. The other devices include a laptop **310**, a computer **312** and a PDA **314**. One of the devices **308** is shown with an application **320** for enabling the user to generate competition groups and communicate with the server **300**.

In some embodiments, handicaps are implemented so that users of different levels are able to compete more fairly. Handicaps provide additional points to users at lower levels so their score is comparable to a more advanced user. The handicaps are determined based on analysis of the scoring. For example, if advanced users on average score **3000**, while intermediate users on average score **2000** and beginners on average score **1000** for the same set of questions, then a fair

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handicap is 1000 per difference in level. Thus, when there is a friendly competition between one user who is advanced by playing every week and three beginner users who play once a month just for fun, a straight game without handicaps is not likely going to be a close competition. However, if the beginner users are given help to put them on par with the advanced user, then the outcome of the competition could result in a beginner user winning.

In some embodiments, each user competes in the same game, but slightly different sets of questions/choices are posed based on the competition level. For example, an intermediate user chooses to play in an open intermediate competition and also with a group of beginner friends. Each of the beginner users is asked to choose what type of play the following play is going to be (e.g. Run or Pass). The intermediate user is also asked to choose the following play. However, the intermediate user is also asked to choose which direction the play will go (e.g. Left or Right). Therefore, the same game is being played to some extent, but there is a slight modification, so that more advanced users have additional options. However, when scoring, the additional options apply only across the same level. Thus, the user selecting Left or Right correctly has no effect on the scoring in the beginner competition. It only affects scoring for the intermediate competition. Thus, users are able to compete at different levels for the same event.

In some embodiments, interactive advertising is used in games of chance and/or skill, sweepstakes, promotional awards, offering frequent player points. For example, a game of skill is played where the game is based on the content of an advertisement or commercial. In some embodiments, users are provided with a template and/or other facilities to generate separate games and contests within the games and promotions available to all.

In some embodiments, a contest involves a sweepstakes event, a game of skill or a promotional event available to all viewing a common event, such as a television broadcast or webcast. In some embodiments, the event is a television commercial. In some embodiments, each and every viewer receives a pre-determined amount of fungible currency such as "points." In some embodiments, the points are earned for watching and/or participating with the television commercial. In some embodiments, the points are redeemable for prizes, services or any other purpose. A user or member of the service is able to choose from an existing template of game formats, or segments of formats, and using the service's ability to couple to and communicate with their friends who are members watching or otherwise, or through social networks such as Facebook, Twitter or Google+, invite friends to participate in their separate event. In some embodiments, the event is able to require all participants in a cohort to pool all points they are to receive for watching and have all points go to that member from this cohort chosen at random utilizing software supplied by the company operating the service. The system selects and credits all of the points won to the appropriate person's account. Instead of the points being awarded by chance, the winner of the points is based on skill, for example, is able to be the person from the cohort who answers all of the questions correctly with the cumulative fastest response time (e.g. the least time elapsed between display of the question and the entry of the correct answer). In some embodiments, the points are awarded in another manner. In some cases, users form teams and challenge other competitors (e.g. friends) to form teams where total scores are used, for teams with a specific number of members, or average scores for teams with unlimited number of members.

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In some embodiments, participants about to watch a television commercial in exchange for a free entry into a sweepstakes available to all viewers have the ability to invite friends to pool their sweepstakes entries so that if any of the accepting members of the group is chosen, the resulting award is divided among the group as provided by the terms of the invitation, for example, to be shared equally or to be divided equally among participants (possibly participants chosen at random). In some embodiments, the contest involves solving a puzzle or playing a word game like Scrabble®, where team contests are enabled which permit teams of friends to work collaboratively.

Users are able to leverage various groups of friends to join a closed contest, where the organizer not only provides the system and method of generating the group but also provides various templates or separate elements of games and contests allowing the organizer/inviter to click on the desired elements, designate eligible friends, and have a company generate the separate contest, administer the contest and the results and credit the winnings.

In some embodiments, payment of separate consideration such as "points" from member's credit balances or separate cash micropayments is able to be implemented. In some embodiments, a user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

In some embodiments, a game of skill is synchronized with a television broadcast. The synchronization is able to be implemented in any manner including, but not limited to, watermarking, fingerprinting and any other implementation. For example, the mobile device and/or the game of skill application determines the start (or some other point) in a broadcast, synchronizes the game with the broadcast. For example, a game that is based on commercials, is synchronized with the broadcast, so that when the commercials appear, the game begins. In some embodiments, advertisements/commercials are displayed on a user's mobile device synchronized with the content of the television. For example, if user is watching football on television, the mobile device is able to detect that and present the user a football or beer advertisement.

One methodology of synchronizing a game of skill or chance with a television broadcast requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks. In some embodi-

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ments, a signal based on audio recognition is sent to a server which synchronizes a preproduced file displayed on cohorts' clients.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology, referred to as watermarking, uses an audio signal, possibly sub-audible to humans, typically an audio artifact unique to a particular program, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

"Fingerprinting" records the soundtrack of every television programs' audio to a server. The microphone on a client is coupled to a massive audio archive on a server to identify what television program is being viewed and synchronize files on a server with the unfolding broadcast including the commercials.

In some embodiments, the game experience for users competing in games of skill or chance who experience a variety of propagation delays relating to where and how they receive a television broadcast is synchronized (e.g. using watermarking or fingerprinting).

To utilize the present invention, users select from or generate competition groups to participate in. The users select system generated competition groups which are specific to levels, geographic locations and other general categories. The users are also able to generate their own competition groups which include friends, family, co-workers or other groups of people they choose. After the competition groups are generated, users are able to join whichever group they are invited to. After joining one or more groups, the users are able to join additional groups beyond that as they are generated and become available to the user. A user is informed of the competition groups available for entering either by email, Short Message Service (SMS) text message, voice message or when the user couples to the network to view/play competitions. After joining the desired competition groups, the user participates in the competitions by answering questions or making selections based on viewing a sporting event, television show, game show, commercials contained within the broadcast or other event where skill or chance is involved in making choices. In addition, games of skill or games of chance with a common start time can be conducted simultaneously in real-time, based on classic card, dice, trivia, word and other games. The selections/answers/predictions are stored and results and/or standings are sent to the user. The results and/or standings throughout the competition show how well the user is doing compared to other competitors via standings, and when the competition is over, the results and/or standings determine who the winner is. Additionally, since multiple competitions are occurring based on a single event, the results and standings are organized so that the user is able to understand how he is doing in each event. For example, if a user is winning by a large margin in his two friendly competitions, but is slightly out of prize position in the open competition, he will not simply relax and coast to victory in his friendly competitions. He is able to realize that by

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performing slightly better, he still has a chance to win a prize in the open competition, while still winning easily in the friendly competitions.

In operation, the present invention allows users to set up and compete in multiple competitions for a single event. Although users are competing against typically different competitors in different competition groups, the same selections are utilized to produce scores that have specific meaning based on the competition group. As described above, a user may lose in one competition group but win in another competition group because the competitors are different. Also, the requirements of each group are different as well. For example, in team play, if the top two scores are counted and the user has one of the top two scores, then his score is important even though he lost in a different competition group. In another example, the competition group is a season long event where there is no weekly winner, but only a year-end winner. Thus, although the competitor is doing terrible one week and has no chance of winning the separate weekly competition, the user is still encouraged to do as well as possible for the year-end total. By allowing users to compete in multiple competition groups for the same event, the user interaction increases substantially. For example, instead of a user simply playing his standard weekly intermediate football competition, the user is also invited to play in his family's tournament for bragging rights, his friend's competition where the winner gets \$20 and his co-worker's competition where the lowest score pays for a round of drinks the following Friday. With more chances to win, users have a much more vested interest in competing. To ensure users do not get frustrated with the scoring, the results and/or standings are displayed in a very user-friendly format so that a user knows how well he is doing in each respective competition.

In some embodiments, multiple servers are used within the network. For example, one server is dedicated for the scoring, a separate server is dedicated for the database and another server is dedicated for hosting the graphical user interface.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A server device for conducting simultaneous multiple contests of skill or chance corresponding to one or more events comprising:

- a. a storage mechanism; and
- b. an application for interacting with the storage mechanism to allow a plurality of users to simultaneously and in real time compete in the multiple contests of skill or chance, the application further for:
 - i. receiving each of the plurality of user's input including event selections related to the one or more events and in which of the multiple contests of skill or chance the selections are to be applied, wherein the event selections are separately and simultaneously applied to each of the selected multiple contests of skill or chance, wherein the event selections enable simultaneously participating with a plurality of the multiple contests of skill or chance;

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- ii. storing results and standings for each of the multiple contests of skill or chance based on the event selections, wherein the standings are based on the results, wherein the standings are separated for each of the multiple contests of skill or chance; and

- iii. transmitting the multiple and separate standings to each client device in real time, wherein the multiple contests of skill or chance are selected from single entry contests and multiple entry contests.

2. The server device as claimed in claim 1 wherein the application is further for providing an interface for generating competitive groups related to the one or more events.

3. The server device as claimed in claim 1 wherein the one or more events are selected from the group consisting of a television-based event, a scheduled competition, a scheduled series of competitions, a sporting event, an event based on a video game, computer game or electronic game, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast.

4. The server device as claimed in claim 1 wherein the one or more events comprise card, dice, trivia, word and other games of skill played simultaneously.

5. The server device as claimed in claim 1 wherein the standings are transmitted in real time to the client device and represent performance for each of the selected multiple contests of skill or chance.

6. The server device as claimed in claim 1 wherein a network identifies the multiple contests of skill or chance a user is eligible for.

7. The server device as claimed in claim 1 further comprising a database stored on the server device for managing the selections, the results, the standings and the multiple contests of skill or chance.

8. The server device as claimed in claim 1 wherein the results are adjusted using a handicap to users in lower level groups.

9. The server device as claimed in claim 1 further configured for implementing a lockout to prevent input after beginning of the one or more events.

10. The server device as claimed in claim 9 wherein the lockout occurs immediately before competitors in the contests of skill or chance are able to see relevant live game action unfold.

11. The server device of claim 1 wherein a number of entries for a user for a multiple entry contest of the multiple entry contests is based on a number of competitors participating in the multiple entry contest.

12. The server device of claim 1 wherein the multiple contests of skill or chance include different types of competitions selected from single day competitions, multiple day competitions and season long competitions.

13. The server device of claim 1 wherein users wager cash to participate in the multiple contests of skill or chance.

14. A device for participating in multiple real time contests of skill or chance corresponding to one or more events comprising:

- a. a communications module for coupling to a server; and
- b. an application for utilizing the communications module for coupling to a server to communicate with the server to allow a user to simultaneously compete in the multiple real time contests of skill or chance, wherein the application is configured for receiving user input including in which of the multiple real time contests of skill or chance to join and receiving additional user input including a single set of event selections related to the one or more events,

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wherein the single set of event selections enable simultaneously and in real time participating separately with the selected multiple real time contests of skill or chance, wherein the multiple contests of skill or chance are selected from single entry contests and multiple entry contests.

15. The device as claimed in claim 14 wherein the one or more events are selected from the group consisting of a television-based event, a scheduled competition, a scheduled series of competitions, a sporting event, an event based on a video game, computer game or electronic game, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast.

16. The device as claimed in claim 14 wherein the one or more events comprise card, dice, trivia, word and other games of skill played simultaneously.

17. The device as claimed in claim 14 wherein the application allows a user to join one or more competitive groups which comprise user generated competitive groups including existing groups on a social networking site or a physical site hosting a social group.

18. The device as claimed in claim 14 wherein the device and the server implement HTML5.

19. The device as claimed in claim 14 further configured for implementing a lockout to prevent input after beginning of the one or more events.

20. The device as claimed in claim 19 wherein the lockout occurs immediately before competitors in the contests of skill or chance are able to see relevant live game action unfold.

21. The device of claim 14 wherein a number of entries for a user for a multiple entry contest of the multiple entry contests is based on a number of competitors participating in the multiple entry contest.

22. The device of claim 14 wherein the multiple contests of skill or chance include different types of competitions selected from single day competitions, multiple day competitions and season long competitions.

23. The device of claim 14 wherein users wager cash to participate in the multiple real time contests of skill or chance.

24. A method programmed in a memory of a device comprising:

- a. generating a list of multiple contests of skill or chance to join;
- b. presenting the list of multiple contests of skill or chance to join, wherein the multiple contests of skill or chance correspond to one or more events;
- c. receiving user input including event selections related to the one or more events and to which of the multiple contests of skill or chance the selections are to be applied, wherein the event selections are separately applied to each of the selected multiple contests of skill or chance, wherein the event selections enable simultaneously and in real time participating in the selected multiple contests of skill or chance;
- d. storing results and standings based on the event selections, wherein the standings are based on the results, wherein the standings are separated for each of the multiple contests of skill or chance; and
- e. transmitting the standings to the device, wherein the multiple contests of skill or chance are selected from single entry contests and multiple entry contests.

25. The method as claimed in claim 24 wherein users are provided a currency for watching the one or more events or participating in the multiple contests of skill or chance.

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26. The method as claimed in claim 25 where the currency is redeemable for prizes or services.

27. The method as claimed in claim 25 wherein each group pools the currency received by users and the currency is distributed to a member of each group.

28. The method as claimed in claim 24 wherein participants in a group of the competitive groups pool sweepstakes entries together and divide a resulting award from the sweepstakes among the participants of the group.

29. The method as claimed in claim 24 wherein a game of skill or chance is synchronized with the one or more events.

30. The method as claimed in claim 29 wherein the game of skill or chance is synchronized with the one or more events using a method of automatic content recognition.

31. The method as claimed in claim 24 wherein promotional awards are awarded for participating.

32. The method as claimed in claim 24 wherein users are able to invite other users to a contest of the multiple contests of skill or chance through a social networking site.

33. The method as claimed in claim 24 wherein a user pays a separate consideration to play in a contest of the multiple contests of skill or chance through a micropay-

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ments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

34. The method as claimed in claim 24 further comprising implementing a lockout to prevent input after beginning of the one or more events.

35. The method as claimed in claim 34 wherein the lockout occurs immediately before competitors in the contests of skill or chance are able to see relevant live game action unfold.

36. The method of claim 24 wherein a number of entries for a user for a multiple entry contest of the multiple entry contests is based on a number of competitors participating in the multiple entry contest.

37. The method of claim 24 wherein the multiple contests of skill or chance include different types of competitions selected from single day competitions, multiple day competitions and season long competitions.

38. The method of claim 24 wherein users wager cash to participate in the multiple contests of skill or chance.

* * * * *

Exhibit 4

US011451883B2

(12) **United States Patent**
Huske et al.

(10) **Patent No.:** **US 11,451,883 B2**

(45) **Date of Patent:** ***Sep. 20, 2022**

(54) **METHOD OF AND SYSTEM FOR
MANAGING CLIENT RESOURCES AND
ASSETS FOR ACTIVITIES ON COMPUTING
DEVICES**

(58) **Field of Classification Search**

CPC H04N 21/8173; H04N 21/2187; H04N
21/41407; H04N 21/4307; H04N 21/442;
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(56) **References Cited**

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U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

"Understanding the Interactivity Between Television and Mobile
commerce", Robert Davis and David Yung, Communications of the
ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

(Continued)

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H04N 21/81 (2011.01)
H04N 21/478 (2011.01)

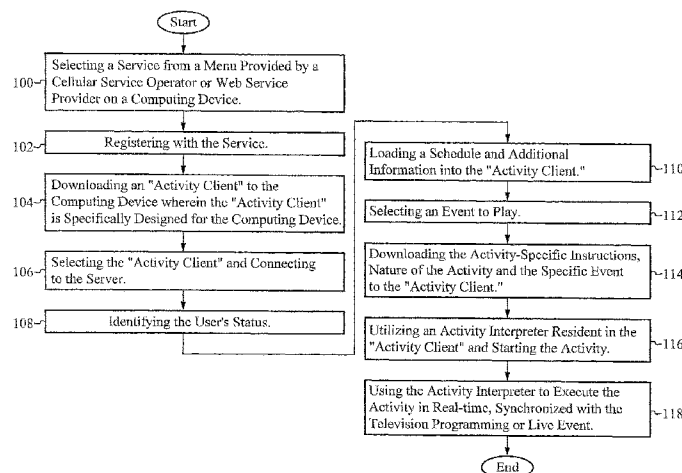
(Continued)

(52) **U.S. Cl.**
CPC **H04N 21/8173** (2013.01); **H04L 67/01**
(2022.05); **H04L 67/52** (2022.05);
(Continued)

(57) **ABSTRACT**

A method of and system for enabling a distributed enter-
tainment system over a computing device is described
herein. When implementing a distributed entertainment sys-
tem wherein the entertainment system is directly correlated
to live events or televised programs, there are a number of
issues that must be addressed such as differing timing and
channels of television programs and separate state laws.
Furthermore, there are a plethora of varying computing
device models possibly requiring model-specific software.
An "Activity Client" is provided to handle such concerns.
Furthermore, since time is of the essence for activities based
on live or televised events, it is necessary to ensure a
computing device is able to receive the necessary updates

(Continued)



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for the program before the event begins. By providing only the needed components instead of entire data packages, the present invention is able to much more efficiently prepare users' computing devices in time.

148 Claims, 4 Drawing Sheets**Related U.S. Application Data**

continuation-in-part of application No. 14/997,352, filed on Jan. 15, 2016, now Pat. No. 10,165,339, which is a continuation of application No. 14/260,480, filed on Apr. 24, 2014, now Pat. No. 9,270,789, which is a continuation of application No. 11/472,241, filed on Jun. 20, 2006, now Pat. No. 8,738,694.

(60) Provisional application No. 60/692,356, filed on Jun. 20, 2005.

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(56)

References Cited

U.S. PATENT DOCUMENTS

4,141,548 A	2/1979	Everton	5,256,863 A	10/1993	Ferguson
4,270,755 A	6/1981	Willhide et al.	5,263,723 A	11/1993	Pearson et al.
4,386,377 A	5/1983	Hunter, Jr.	5,283,734 A	2/1994	Von Kohorn
4,496,148 A	1/1985	Morstein et al.	5,327,485 A	7/1994	Leaden
4,521,803 A	6/1985	Glittinger	5,343,236 A	8/1994	Koppe et al.
4,592,546 A	6/1986	Fascenda et al.	5,343,239 A	8/1994	Lappington et al.
4,816,904 A	3/1989	McKenna et al.	5,417,424 A	5/1995	Snowden
4,918,603 A	4/1990	Hughes et al.	5,462,275 A	10/1995	Lowe et al.
4,930,010 A	5/1990	MacDonald	5,479,492 A	12/1995	Hofstee et al.
5,013,038 A	5/1991	Luvenberg	5,488,659 A	1/1996	Millani
5,018,736 A	5/1991	Pearson et al.	5,519,433 A	5/1996	Lappington
5,035,422 A	7/1991	Berman	5,530,483 A	6/1996	Cooper
5,073,931 A	12/1991	Audebert et al.	5,553,120 A	9/1996	Katz
5,083,271 A	1/1992	Thatcher et al.	5,566,291 A	10/1996	Boulton et al.
5,083,800 A	1/1992	Lockton	5,585,975 A	12/1996	Bliss
5,119,295 A	6/1992	Kapur	5,586,257 A	12/1996	Perlman
5,120,076 A	6/1992	Luxenberg et al.	5,589,765 A	12/1996	Ohmart et al.
5,213,337 A	5/1993	Sherman	5,594,938 A	1/1997	Engel
5,227,874 A	7/1993	Von Kohorn	5,618,232 A	4/1997	Martin
			5,628,684 A	5/1997	Jean-Etienne
			5,636,920 A	6/1997	Shur et al.
			5,638,113 A	6/1997	Lappington
			5,643,088 A	7/1997	Vaughn et al.
			5,663,757 A	9/1997	Morales
			5,759,101 A	6/1998	Won Kohorn
			5,761,606 A	6/1998	Wolzien
			5,762,552 A	6/1998	Voung et al.
			5,764,275 A	6/1998	Lappington et al.
			5,794,210 A	8/1998	Goldhaber et al.
			5,805,230 A	9/1998	Staron
			5,813,913 A	9/1998	Bemer et al.
			5,818,438 A *	10/1998	Howe H04N 21/8166 715/718
			5,828,843 A	10/1998	Grimm
			5,838,774 A	11/1998	Weiser, Jr.
			5,838,909 A	11/1998	Roy
			5,846,132 A	12/1998	Junkin
			5,848,397 A	12/1998	Marsh et al.
			5,860,862 A	1/1999	Junkin
			5,894,556 A	4/1999	Grimm
			5,916,024 A	6/1999	Von Kohorn
			5,870,683 A	9/1999	Wells et al.
			5,970,143 A	10/1999	Schneier et al.
			5,971,854 A	10/1999	Pearson et al.
			5,987,440 A	11/1999	O'Neil et al.
			6,009,458 A	12/1999	Hawkins et al.
			6,015,344 A	1/2000	Kelly et al.
			6,016,337 A	1/2000	Pykalisto
			6,038,599 A	3/2000	Black et al.
			6,042,477 A	3/2000	Addink
			6,064,449 A	5/2000	White
			6,104,815 A	8/2000	Alcorn et al.
			6,110,041 A	8/2000	Walker et al.
			6,117,013 A	9/2000	Elba
			6,126,543 A	10/2000	Friedman
			6,128,660 A	10/2000	Grimm
			6,135,881 A	10/2000	Abbott et al.
			6,154,131 A	11/2000	Jones, II
			6,174,237 B1	1/2001	Stephenson
			6,182,084 B1	1/2001	Cockrell et al.
			6,193,610 B1	2/2001	Junkin
			6,222,642 B1	4/2001	Farrell et al.
			6,233,736 B1	5/2001	Wolzien
			6,251,017 B1	6/2001	Leason et al.
			6,263,447 B1	7/2001	French
			6,267,670 B1	7/2001	Walker
			6,287,199 B1	9/2001	McKeown et al.
			6,293,868 B1	9/2001	Bernard
			6,312,336 B1	11/2001	Handelman et al.
			6,343,320 B1	1/2002	Fairchild
			6,345,297 B1	2/2002	Grimm
			6,371,855 B1	4/2002	Gavriloff
			6,373,462 B1	4/2002	Pan
			6,411,969 B1	6/2002	Tam
			6,416,414 B1	7/2002	Stadelmann
			6,418,298 B1	7/2002	Sonnenfeld
			6,425,828 B2	7/2002	Walker et al.
			6,434,398 B1	8/2002	Inselberg
			6,446,262 B1	9/2002	Malaure et al.

US 11,451,883 B2

Page 3

(56)

References Cited

U.S. PATENT DOCUMENTS

6,470,180	B1	10/2002	Kotzin et al.	7,187,658	B2	3/2007	Koyanagi
6,475,090	B2	11/2002	Gregory	7,191,447	B1	3/2007	Ellis et al.
6,524,189	B1	2/2003	Rautila	7,192,352	B2	3/2007	Walker et al.
6,527,641	B1	3/2003	Sinclair et al.	7,194,758	B1	3/2007	Waki et al.
6,530,082	B1	3/2003	Del Sesto et al.	7,228,349	B2	6/2007	Barone, Jr. et al.
6,536,037	B1	3/2003	Guheen et al.	7,231,630	B2	6/2007	Acott et al.
6,578,068	B1	6/2003	Bowma-Amuah	7,233,922	B2	6/2007	Asher et al.
6,594,098	B1	7/2003	Sutardja	7,240,093	B1	7/2007	Danieli et al.
6,604,997	B2	7/2003	Saidakovsky et al.	7,244,181	B2	7/2007	Wang et al.
6,610,953	B1	8/2003	Tao et al.	7,249,367	B2	7/2007	Bove, Jr. et al.
6,611,755	B1	8/2003	Coffee	7,254,605	B1	8/2007	Strum
6,648,760	B1	11/2003	Nicastro	7,260,782	B2	8/2007	Wallace et al.
6,659,860	B1	12/2003	Yamamoto et al.	RE39,818	E	9/2007	Slifer
6,659,861	B1	12/2003	Faris	7,283,830	B2	10/2007	Buckley
6,659,872	B1	12/2003	Kaufman et al.	7,288,027	B2	10/2007	Overton
6,690,661	B1	2/2004	Agarwal et al.	7,341,517	B2	3/2008	Asher et al.
6,697,869	B1	2/2004	Mallart	7,343,617	B1	3/2008	Kartcher et al.
6,718,350	B1 *	4/2004	Karbowski G06F 8/65 707/695	7,347,781	B2	3/2008	Schultz
6,752,396	B2	6/2004	Smith	7,351,149	B1	4/2008	Simon et al.
6,758,754	B1	7/2004	Lavanchy et al.	7,367,042	B1	4/2008	Dakss et al.
6,758,755	B2	7/2004	Kelly et al.	7,379,705	B1	5/2008	Rados et al.
6,760,595	B2	7/2004	Insellberg	7,389,144	B1	6/2008	Osorio
6,763,377	B1	7/2004	Balknap et al.	7,430,718	B2	9/2008	Garipey-Viles
6,766,524	B1	7/2004	Matheny et al.	7,452,273	B2	11/2008	Amaitis et al.
6,774,926	B1 *	8/2004	Ellis H04N 21/4586 348/14.01	7,460,037	B2	12/2008	Cattone et al.
6,785,561	B1	8/2004	Kim	7,461,067	B2	12/2008	Dewing et al.
6,801,380	B1	10/2004	Saturdja	7,502,610	B2	3/2009	Maher
6,806,889	B1	10/2004	Malaure et al.	7,510,474	B2	3/2009	Carter, Sr.
6,807,675	B1	10/2004	Millard et al.	7,517,282	B1	4/2009	Pryor
6,811,482	B2	11/2004	Letovsky	7,534,169	B2	5/2009	Amaitis et al.
6,811,487	B2	11/2004	Sengoku	7,543,052	B1	6/2009	Cesa Klein
6,816,628	B1	11/2004	Sarachik et al.	7,562,134	B1	7/2009	Fingerhut et al.
6,817,947	B2	11/2004	Tanskanen	7,602,808	B2	10/2009	Ullmann
6,824,469	B2	11/2004	Allibhoy et al.	7,610,330	B1	10/2009	Quinn
6,837,789	B2	1/2005	Garahi et al.	7,614,944	B1	11/2009	Hughes et al.
6,837,791	B1	1/2005	McNutt et al.	7,630,986	B1	12/2009	Herz et al.
6,840,861	B2	1/2005	Jordan et al.	7,693,781	B2	4/2010	Asher et al.
6,845,389	B1	1/2005	Sen	7,699,707	B2	4/2010	Bahou
6,846,239	B2	1/2005	Washio	7,702,723	B2	4/2010	Dyl
6,857,122	B1	2/2005	Takeda et al.	7,711,628	B2	5/2010	Davie et al.
6,863,610	B2	3/2005	Vancraeynest	7,729,286	B2	6/2010	Mishra
6,870,720	B2	3/2005	Iwata et al.	7,753,772	B1	7/2010	Walker
6,871,226	B1	3/2005	Ensley et al.	7,753,789	B2	7/2010	Walker et al.
6,873,610	B1	3/2005	Noever	7,780,528	B2	8/2010	Hirayama
6,884,166	B2	4/2005	Leen et al.	7,828,661	B1	11/2010	Fish
6,884,172	B1	4/2005	Lloyd et al.	7,835,961	B2	11/2010	Davie et al.
6,887,159	B2	5/2005	Leen et al.	7,860,993	B2	12/2010	Chintala
6,888,929	B1	5/2005	Saylor	7,886,003	B2	2/2011	Newman
6,893,347	B1	5/2005	Zilliacus et al.	7,907,211	B2	3/2011	Oostveen et al.
6,898,762	B2	5/2005	Ellis et al.	7,907,598	B2	3/2011	Anisimov
6,899,628	B2	5/2005	Leen et al.	7,909,332	B2	3/2011	Root
6,903,681	B2	6/2005	Faris	7,925,756	B1	4/2011	Riddle
6,908,389	B1	6/2005	Puskala	7,926,810	B2	4/2011	Fisher et al.
6,942,574	B1	9/2005	LeMay et al.	7,937,318	B2	5/2011	Davie et al.
6,944,228	B1	9/2005	Dakss et al.	7,941,482	B2	5/2011	Bates
6,960,088	B1	11/2005	Long	7,941,804	B1	5/2011	Herington
6,978,053	B1	12/2005	Sarachik et al.	7,976,389	B2	7/2011	Cannon et al.
7,001,279	B1	2/2006	Barber et al.	8,002,618	B1	8/2011	Lockton
7,029,394	B2	4/2006	Leen et al.	8,006,314	B2	8/2011	Wold
7,035,626	B1	4/2006	Luciano, Jr.	8,025,565	B2	9/2011	Leen et al.
7,035,653	B2	4/2006	Simon et al.	8,028,315	B1	9/2011	Barber
7,058,592	B1	6/2006	Beckerman et al.	8,082,150	B2	12/2011	Wold
7,076,434	B1	7/2006	Newman et al.	8,086,445	B2	12/2011	Wold et al.
7,085,552	B2	8/2006	Buckley	8,086,510	B2	12/2011	Amaitis et al.
7,116,310	B1	10/2006	Evans et al.	8,092,303	B2	1/2012	Amaitis et al.
7,117,517	B1	10/2006	Milazzo et al.	8,092,306	B2	1/2012	Root
7,120,924	B1	10/2006	Katcher et al.	8,105,141	B2	1/2012	Leen et al.
7,124,410	B2	10/2006	Berg	8,107,674	B2	1/2012	Davis et al.
7,125,336	B2	10/2006	Anttila et al.	8,109,827	B2	2/2012	Cahill et al.
7,136,871	B2	11/2006	Ozer et al.	8,128,474	B2	3/2012	Amaitis et al.
7,144,011	B2	12/2006	Asher et al.	8,147,313	B2	4/2012	Amaitis et al.
7,169,050	B1	1/2007	Tyler	8,147,373	B2	4/2012	Amaitis et al.
7,185,355	B1	2/2007	Ellis	8,149,530	B1	4/2012	Lockton et al.
				8,155,637	B2	4/2012	Fujisawa
				8,162,759	B2	4/2012	Yamaguchi
				8,176,518	B1	5/2012	Junkin et al.
				8,186,682	B2	5/2012	Amaitis et al.
				8,204,808	B2	6/2012	Amaitis et al.
				8,219,617	B2	7/2012	Ashida

US 11,451,883 B2

Page 4

(56)

References Cited

U.S. PATENT DOCUMENTS

8,240,669 B2	8/2012	Asher et al.	9,672,692 B2	6/2017	Lockton
8,246,048 B2	8/2012	Amaitis et al.	9,687,738 B2	6/2017	Lockton et al.
8,267,403 B2	9/2012	Fisher et al.	9,687,739 B2	6/2017	Lockton et al.
8,342,924 B2	1/2013	Leen et al.	9,707,482 B2	7/2017	Lockton et al.
8,342,942 B2	1/2013	Amaitis et al.	9,716,918 B1	7/2017	Lockton et al.
8,353,763 B2	1/2013	Amaitis et al.	9,724,603 B2	8/2017	Lockton et al.
8,376,855 B2	2/2013	Lockton et al.	9,744,453 B2	8/2017	Lockton et al.
8,396,001 B2	3/2013	Jung	9,805,549 B2	10/2017	Asher et al.
8,397,257 B1	3/2013	Barber	9,821,233 B2	11/2017	Lockton et al.
8,465,021 B2	6/2013	Asher et al.	9,878,243 B2	1/2018	Lockton et al.
8,473,393 B2	6/2013	Davie et al.	9,881,337 B2	1/2018	Jaycob et al.
8,474,819 B2	7/2013	Asher et al.	9,901,820 B2	2/2018	Lockton et al.
8,535,138 B2	9/2013	Amaitis et al.	9,908,053 B2	3/2018	Lockton et al.
8,538,563 B1	9/2013	Barber	9,919,210 B2	3/2018	Lockton
8,543,487 B2	9/2013	Asher et al.	9,919,211 B2	3/2018	Lockton et al.
8,555,313 B2	10/2013	Newnam	9,919,221 B2	3/2018	Lockton et al.
8,556,691 B2	10/2013	Leen et al.	9,978,217 B2	5/2018	Lockton
8,585,490 B2	11/2013	Amaitis et al.	9,993,730 B2	6/2018	Lockton et al.
8,622,798 B2	1/2014	Lockton et al.	9,999,834 B2	6/2018	Lockton et al.
8,632,392 B2	1/2014	Shore et al.	10,052,557 B2	8/2018	Lockton et al.
8,634,943 B2	1/2014	Root	10,089,815 B2	10/2018	Asher et al.
8,638,517 B2	1/2014	Lockton et al.	10,096,210 B2	10/2018	Amaitis et al.
8,641,511 B2	2/2014	Ginsberg et al.	10,137,369 B2	11/2018	Lockton et al.
8,659,848 B2	2/2014	Lockton et al.	10,150,031 B2	12/2018	Lockton et al.
8,672,751 B2	3/2014	Leen et al.	10,165,339 B2	12/2018	Huske et al.
8,699,168 B2	4/2014	Lockton et al.	10,186,116 B2	1/2019	Lookton
8,705,195 B2	4/2014	Lockton	10,195,526 B2	2/2019	Lookton et al.
8,708,789 B2	4/2014	Asher et al.	10,226,698 B1	3/2019	Lookton et al.
8,717,701 B2	5/2014	Lockton et al.	10,226,705 B2	3/2019	Lookton et al.
8,727,352 B2	5/2014	Amaitis et al.	10,232,270 B2	3/2019	Lookton et al.
8,734,227 B2	5/2014	Leen et al.	10,248,290 B2	4/2019	Galfond
8,737,004 B2	5/2014	Lockton et al.	10,279,253 B2	5/2019	Lockton
8,738,694 B2	5/2014	Huske et al.	10,360,767 B2	7/2019	Russell et al.
8,771,058 B2	7/2014	Alderucci et al.	10,569,175 B2	2/2020	Kosai et al.
8,780,482 B2	7/2014	Lockton et al.	10,653,955 B2	5/2020	Lockton
8,805,732 B2	8/2014	Davie et al.	10,695,672 B2	6/2020	Lockton et al.
8,813,112 B1	8/2014	Cibula et al.	10,709,987 B2	7/2020	Lockton et al.
8,814,664 B2	8/2014	Amaitis et al.	10,721,543 B2	7/2020	Huske et al.
8,817,408 B2	8/2014	Lockton et al.	10,981,070 B2	4/2021	Isgreen
8,837,072 B2	9/2014	Lockton et al.	2001/0004609 A1	6/2001	Walker et al.
8,849,225 B1	9/2014	Choti	2001/0005670 A1	6/2001	Lahtinen
8,849,255 B2 *	9/2014	Choti H04L 67/18 455/414.1	2001/0013067 A1	8/2001	Koyanagi
8,858,313 B1	10/2014	Selfors	2001/0013125 A1	8/2001	Kitsukawa et al.
8,870,639 B2	10/2014	Lockton et al.	2001/0020298 A1	9/2001	Rector, Jr. et al.
8,935,715 B2	1/2015	Cibula et al.	2001/0032333 A1	10/2001	Flickinger
9,056,251 B2	6/2015	Lockton	2001/0036272 A1	11/2001	Hirayama
9,067,143 B2	6/2015	Lockton et al.	2001/0036853 A1 *	11/2001	Thomas G06Q 50/34 463/17
9,069,651 B2	6/2015	Barber	2001/0044339 A1	11/2001	Cordero
9,076,303 B1	7/2015	Park	2001/0054019 A1	12/2001	de Fabrega
9,098,883 B2	8/2015	Asher et al.	2002/0010789 A1	1/2002	Lord
9,111,417 B2	8/2015	Leen et al.	2002/0018477 A1	2/2002	Katz
9,205,339 B2	12/2015	Cibula et al.	2002/0026321 A1	2/2002	Faris
9,233,293 B2	1/2016	Lockton	2002/0029381 A1	3/2002	Inselberg
9,258,601 B2	2/2016	Lockton et al.	2002/0035609 A1 *	3/2002	Lessard G06F 16/9537 709/217
9,270,789 B2	2/2016	Huske et al.	2002/0037766 A1	3/2002	Muniz
9,289,692 B2	3/2016	Barber	2002/0069265 A1	3/2002	Bountour
9,306,952 B2	4/2016	Burman et al.	2002/0042293 A1	4/2002	Ubale et al.
9,314,686 B2	4/2016	Lockton	2002/0046099 A1	4/2002	Frengut et al.
9,314,701 B2	4/2016	Lockton et al.	2002/0054088 A1	5/2002	Tanskanen et al.
9,355,518 B2	5/2016	Amaitis et al.	2002/0055385 A1	5/2002	Otsu
9,406,189 B2	8/2016	Scott et al.	2002/0056089 A1	5/2002	Houston
9,430,901 B2	8/2016	Amaitis et al.	2002/0059094 A1	5/2002	Hosea et al.
9,457,272 B2	10/2016	Lockton et al.	2002/0059623 A1 *	5/2002	Rodriguez H04N 21/8166 725/91
9,498,724 B2	11/2016	Lockton et al.	2002/0069076 A1	6/2002	Faris
9,501,904 B2	11/2016	Lockton	2002/0076084 A1	6/2002	Tian
9,504,922 B2	11/2016	Lockton et al.	2002/0078176 A1	6/2002	Nomura et al.
9,511,287 B2	12/2016	Lockton et al.	2002/0083461 A1	6/2002	Hutcheson
9,526,991 B2	12/2016	Lockton et al.	2002/0091833 A1	7/2002	Grimm
9,536,396 B2	1/2017	Amaitis et al.	2002/0094869 A1	7/2002	Harkham
9,556,991 B2	1/2017	Furuya	2002/0095333 A1	7/2002	Jokinen et al.
9,604,140 B2	3/2017	Lockton et al.	2002/0097983 A1	7/2002	Wallace et al.
9,652,937 B2	5/2017	Lockton	2002/0099709 A1	7/2002	Wallace
9,662,576 B2	5/2017	Lockton et al.	2002/0100063 A1	7/2002	Herigstad et al.
9,662,577 B2	5/2017	Lockton et al.	2002/0103696 A1	8/2002	Huang et al.
			2002/0105535 A1	8/2002	Wallace et al.
			2002/0107073 A1	8/2002	Binney

US 11,451,883 B2

Page 5

(56)

References Cited

U.S. PATENT DOCUMENTS

2002/0108112 A1	8/2002	Wallace et al.	2004/0125877 A1	7/2004	Chang
2002/0108125 A1	8/2002	Joao	2004/0128319 A1	7/2004	Davis et al.
2002/0108127 A1	8/2002	Lew et al.	2004/0139158 A1	7/2004	Datta
2002/0112249 A1	8/2002	Hendricks et al.	2004/0139482 A1	7/2004	Hale
2002/0115488 A1	8/2002	Berry et al.	2004/0148638 A1	7/2004	Weisman et al.
2002/0119821 A1	8/2002	Sen	2004/0152517 A1	8/2004	Haedisty
2002/0120930 A1	8/2002	Yona	2004/0152519 A1	8/2004	Wang
2002/0124247 A1	9/2002	Houghton	2004/0158855 A1	8/2004	Gu et al.
2002/0132614 A1	9/2002	Vanlujit et al.	2004/0162124 A1	8/2004	Barton et al.
2002/0133817 A1	9/2002	Markel	2004/0166873 A1	8/2004	Simic
2002/0133827 A1	9/2002	Newman et al.	2004/0176162 A1	9/2004	Rothschild
2002/0142843 A1	10/2002	Roelofs	2004/0178923 A1	9/2004	Kuang
2002/0144273 A1	10/2002	Reto	2004/0183824 A1	9/2004	Benson
2002/0147049 A1	10/2002	Carter, Sr.	2004/0185881 A1	9/2004	Lee
2002/0157002 A1	10/2002	Messerges et al.	2004/0190779 A1	9/2004	Sarachik et al.
2002/0157005 A1	10/2002	Bunk	2004/0198495 A1	10/2004	Cisneros et al.
2002/0159576 A1	10/2002	Adams	2004/0201626 A1	10/2004	Lavoie
2002/0162031 A1	10/2002	Levin et al.	2004/0203667 A1	10/2004	Shroder
2002/0162117 A1	10/2002	Pearson	2004/0203898 A1	10/2004	Bodin et al.
2002/0165020 A1	11/2002	Koyama	2004/0210507 A1	10/2004	Asher et al.
2002/0165025 A1	11/2002	Kawahara	2004/0215756 A1	10/2004	VanAntwerp
2002/0177483 A1	11/2002	Cannon	2004/0216161 A1	10/2004	Barone, Jr. et al.
2002/0184624 A1	12/2002	Spencer	2004/0216171 A1	10/2004	Barone, Jr. et al.
2002/0187825 A1	12/2002	Tracy	2004/0224750 A1	11/2004	Ai-Ziyoud
2002/0198050 A1	12/2002	Patchen	2004/0242321 A1	12/2004	Overton
2003/0002638 A1	1/2003	Kaars	2004/0266513 A1	12/2004	Odom
2003/0003997 A1	1/2003	Vuong et al.	2005/0005303 A1	1/2005	Barone, Jr. et al.
2003/0013528 A1	1/2003	Allibhoy et al.	2005/0021942 A1	1/2005	Diehl et al.
2003/0023547 A1	1/2003	France	2005/0026699 A1	2/2005	Kinzer et al.
2003/0040363 A1	2/2003	Sandberg	2005/0028208 A1	2/2005	Ellis
2003/0054885 A1	3/2003	Pinto et al.	2005/0043094 A1	2/2005	Nguyen et al.
2003/0060247 A1	3/2003	Goldberg et al.	2005/0076371 A1	4/2005	Nakamura
2003/0066089 A1	4/2003	Anderson	2005/0077997 A1	4/2005	Landram
2003/0069828 A1	4/2003	Blazey et al.	2005/0060219 A1	5/2005	Ditering et al.
2003/0070174 A1	4/2003	Solomon	2005/0097599 A1	5/2005	Potnick et al.
2003/0078924 A1	4/2003	Liechty et al.	2005/0101309 A1 *	5/2005	Croome G06F 9/44584 455/418
2003/0086691 A1	5/2003	Yu	2005/0113164 A1	5/2005	Buecheler et al.
2003/0087652 A1	5/2003	Simon et al.	2005/0003878 A1	6/2005	Updike
2003/0088648 A1	5/2003	Bellaton	2005/0131984 A1	6/2005	Hofmann et al.
2003/0114224 A1	6/2003	Anttila et al.	2005/0138668 A1	6/2005	Gray et al.
2003/0115152 A1	6/2003	Flaherty	2005/0144102 A1	6/2005	Johnson
2003/0125109 A1	7/2003	Green	2005/0155083 A1	7/2005	Oh
2003/0134678 A1	7/2003	Tanaka	2005/0177861 A1	8/2005	Ma et al.
2003/0144017 A1	7/2003	Inselberg	2005/0210526 A1	9/2005	Levy et al.
2003/0154242 A1	8/2003	Hayes et al.	2005/0216838 A1	9/2005	Graham
2003/0165241 A1 *	9/2003	Fransdonk G06Q 20/3823 380/258	2005/0235043 A1	10/2005	Teodosiu et al.
2003/0177167 A1	9/2003	Lafage et al.	2005/0239551 A1	10/2005	Griswold
2003/0177504 A1	9/2003	Paulo et al.	2005/0255901 A1	11/2005	Kreutzer
2003/0189668 A1	10/2003	Newman et al.	2005/0256895 A1	11/2005	Dussault
2003/0195023 A1	10/2003	Di Cesare	2005/0266869 A1	12/2005	Jung
2003/0195807 A1	10/2003	Maggio	2005/0267969 A1	12/2005	Poikselka et al.
2003/0208579 A1 *	11/2003	Brady, Jr. H04L 67/34 709/223	2005/0273804 A1	12/2005	Preisman
2003/0211856 A1	11/2003	Ziliacus	2005/0283800 A1	12/2005	Ellis et al.
2003/0212691 A1	11/2003	Kuntala et al.	2005/0288080 A1	12/2005	Lockton
2003/0216185 A1	11/2003	Varley	2005/0288101 A1	12/2005	Lockton et al.
2003/0216857 A1	11/2003	Feldman et al.	2005/0288812 A1	12/2005	Cheng
2003/0228866 A1 *	12/2003	Pezeshki H04L 67/04 455/422.1	2006/0020700 A1	1/2006	Qiu
2003/0233425 A1	12/2003	Lyons et al.	2006/0025070 A1	2/2006	Kim et al.
2004/0005919 A1	1/2004	Walker et al.	2006/0046810 A1	3/2006	Tabata
2004/0014524 A1	1/2004	Pearlman	2006/0047772 A1 *	3/2006	Crutcher H04L 67/02 709/212
2004/0015442 A1	1/2004	Hmlinen	2006/0053390 A1	3/2006	Garipey-Viles
2004/0022366 A1	2/2004	Ferguson et al.	2006/0058103 A1	3/2006	Danieli
2004/0025190 A1	2/2004	McCalla	2006/0059161 A1	3/2006	Millett et al.
2004/0056897 A1	3/2004	Ueda	2006/0063590 A1	3/2006	Abassi et al.
2004/0060063 A1	3/2004	Russ et al.	2006/0082068 A1	4/2006	Patchen
2004/0073915 A1	4/2004	Dureau	2006/0087585 A1	4/2006	Seo
2004/0088729 A1	5/2004	Petrovic et al.	2006/0089199 A1	4/2006	Jordan et al.
2004/0093302 A1	5/2004	Baker et al.	2006/0094409 A1	5/2006	Inselberg
2004/0152454 A1	5/2004	Kauppinen	2006/0101492 A1	5/2006	Lowcock
2004/0107138 A1	6/2004	Maggio	2006/0111168 A1	5/2006	Nguyen
2004/0117831 A1	6/2004	Ellis et al.	2006/0135253 A1	6/2006	George et al.
2004/0117839 A1	6/2004	Watson et al.	2006/0148569 A1	7/2006	Beck
			2006/0156371 A1	7/2006	Maetz et al.
			2006/0160597 A1	7/2006	Wright
			2006/0174307 A1	8/2006	Hwang et al.
			2006/0183547 A1	8/2006	McMonigle
			2006/0183548 A1	8/2006	Morris et al.

US 11,451,883 B2

Page 6

(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0190654	A1	8/2006	Joy	2011/0053681	A1	3/2011	Goldman
2006/0205483	A1	9/2006	Meyer et al.	2011/0065490	A1	3/2011	Lutnick
2006/0205509	A1	9/2006	Hirota	2011/0081958	A1	4/2011	Herman
2006/0205510	A1	9/2006	Lauper	2011/0116461	A1	5/2011	Holt
2006/0217198	A1	9/2006	Johnson	2011/0130197	A1	6/2011	Bythar et al.
2006/0236352	A1	10/2006	Scott, III	2011/0227287	A1	9/2011	Reabe
2006/0248553	A1	11/2006	Mikkelsen et al.	2011/0269548	A1	11/2011	Barclay et al.
2006/0248564	A1	11/2006	Zinevitch	2011/0306428	A1	12/2011	Lockton et al.
2006/0256865	A1	11/2006	Westerman	2012/0058808	A1	3/2012	Lockton
2006/0256868	A1	11/2006	Westerman	2012/0115585	A1	5/2012	Goldman
2006/0269120	A1	11/2006	Mehmadi et al.	2012/0157178	A1	6/2012	Lockton
2006/0285586	A1	12/2006	Westerman	2012/0264496	A1	10/2012	Behrman et al.
2007/0004516	A1	1/2007	Jordan et al.	2012/0282995	A1	11/2012	Allen et al.
2007/0013547	A1	1/2007	Boaz	2012/0295686	A1	11/2012	Lockton
2007/0019826	A1	1/2007	Horbach et al.	2013/0005453	A1	1/2013	Nguyen et al.
2007/0028272	A1	2/2007	Lockton	2013/0072271	A1	3/2013	Lockton et al.
2007/0037623	A1	2/2007	Romik	2013/0079081	A1	3/2013	Lockton et al.
2007/0054695	A1	3/2007	Huske et al.	2013/0079092	A1	3/2013	Lockton et al.
2007/0078009	A1	4/2007	Lockton et al.	2013/0079093	A1	3/2013	Lockton et al.
2007/0083920	A1	4/2007	Mizoguchi et al.	2013/0079135	A1	3/2013	Lockton et al.
2007/0086465	A1	4/2007	Paila et al.	2013/0079150	A1	3/2013	Lockton et al.
2007/0087832	A1	4/2007	Abbott	2013/0079151	A1	3/2013	Lockton et al.
2007/0093296	A1	4/2007	Asher	2013/0196774	A1	8/2013	Lockton et al.
2007/0101358	A1	5/2007	Ambady	2013/0225285	A1	8/2013	Lockton
2007/0106721	A1	5/2007	Schloter	2013/0225299	A1	8/2013	Lockton
2007/0107010	A1	5/2007	Jolna et al.	2014/0031134	A1	1/2014	Lockton et al.
2007/0129144	A1	6/2007	Katz	2014/0100011	A1	4/2014	Gingher
2007/0147870	A1	7/2007	Nagashima et al.	2014/0106832	A1	4/2014	Lockton et al.
2007/0162328	A1	7/2007	Reich	2014/0128139	A1	5/2014	Shuster et al.
2007/0183744	A1	8/2007	Koizumi	2014/0155130	A1	6/2014	Lockton et al.
2007/0197247	A1	8/2007	Inselberg	2014/0155134	A1	6/2014	Lockton
2007/0210908	A1	9/2007	Putterman et al.	2014/0206446	A1	7/2014	Lockton et al.
2007/0219856	A1	9/2007	Ahmad-Taylor	2014/0237025	A1	8/2014	Huske et al.
2007/0222652	A1	9/2007	Cattone et al.	2014/0248952	A1	9/2014	Cibula et al.
2007/0226062	A1	9/2007	Hughes et al.	2014/0256432	A1	9/2014	Lockton et al.
2007/0238525	A1	10/2007	Suomela	2014/0279439	A1	9/2014	Brown
2007/0243936	A1	10/2007	Binestock et al.	2014/0287832	A1	9/2014	Lockton et al.
2007/0244570	A1	10/2007	Speiser et al.	2014/0309001	A1	10/2014	Root
2007/0244585	A1	10/2007	Speiser et al.	2014/0335961	A1	11/2014	Lockton et al.
2007/0244749	A1	10/2007	Speiser et al.	2014/0335962	A1	11/2014	Lockton et al.
2007/0265089	A1	11/2007	Robarts	2014/0378212	A1	12/2014	Sims
2007/0294410	A1	12/2007	Pandya	2015/0011310	A1	1/2015	Lockton et al.
2008/0005037	A1	1/2008	Hammad	2015/0024814	A1	1/2015	Root
2008/0013927	A1	1/2008	Kelly et al.	2015/0067732	A1	3/2015	Howe et al.
2008/0051201	A1	2/2008	Lore	2015/0148130	A1	5/2015	Cibula et al.
2008/0066129	A1	3/2008	Katcher et al.	2015/0238839	A1	8/2015	Lockton
2008/0076497	A1	3/2008	Kiskis et al.	2015/0238873	A1	8/2015	Arnone et al.
2008/0104630	A1	5/2008	Bruce	2015/0258452	A1	9/2015	Lockton et al.
2008/0146337	A1	6/2008	Halonon	2015/0356831	A1	12/2015	Osibodu
2008/0169605	A1	7/2008	Shuster et al.	2016/0023116	A1	1/2016	Wire
2008/0222672	A1	9/2008	Piesing	2016/0045824	A1	2/2016	Lockton et al.
2008/0240681	A1	10/2008	Fukushima	2016/0049049	A1	2/2016	Lockton
2008/0248865	A1	10/2008	Tedesco	2016/0054872	A1	2/2016	Cibula et al.
2008/0270288	A1	10/2008	Butterly et al.	2016/0082357	A1	3/2016	Lockton
2008/0288600	A1	11/2008	Clark	2016/0121208	A1	5/2016	Lockton et al.
2009/0011781	A1	1/2009	Merrill et al.	2016/0134947	A1	5/2016	Huske et al.
2009/0094632	A1	4/2009	Newman et al.	2016/0217653	A1	7/2016	Meyer
2009/0103892	A1	4/2009	Hirayama	2016/0271501	A1	9/2016	Balsbaugh
2009/0186676	A1	7/2009	Amaitis et al.	2016/0361647	A1	12/2016	Lockton et al.
2009/0163271	A1	9/2009	George et al.	2016/0375362	A1	12/2016	Lockton et al.
2009/0228351	A1	9/2009	Rijnsenbrij	2017/0036110	A1	2/2017	Lockton et al.
2009/0234674	A1 *	9/2009	Wurster	2017/0036117	A1	2/2017	Lockton et al.
			G06Q 50/22	2017/0043259	A1	2/2017	Lockton et al.
			705/3	2017/0053498	A1	2/2017	Lockton
				2017/0065891	A1	3/2017	Lockton et al.
				2017/0098348	A1	4/2017	Odom
				2017/0103615	A1	4/2017	Theodosopoulos
				2017/0128840	A1	5/2017	Croci
				2017/0221314	A1	8/2017	Lockton
				2017/0225071	A1	8/2017	Lockton et al.
				2017/0225072	A1	8/2017	Lockton et al.
				2017/0232340	A1	8/2017	Lockton
				2017/0243438	A1	8/2017	Merati
				2017/0249801	A1	8/2017	Malek
				2017/0252649	A1	9/2017	Lockton et al.
				2017/0259173	A1	9/2017	Lockton et al.
				2017/0264961	A1	9/2017	Lockton
				2017/0282067	A1	10/2017	Lockton et al.
				2017/0296916	A1	10/2017	Lockton et al.
2009/0264188	A1	10/2009	Soukup				
2009/0271512	A1	10/2009	Jorgensen				
2009/0325716	A1	12/2009	Harari				
2010/0099421	A1	4/2010	Patel et al.				
2010/0099471	A1	4/2010	Feeney et al.				
2010/0107194	A1	4/2010	McKissick et al.				
2010/0120503	A1	5/2010	Hoffman et al.				
2010/0137057	A1	6/2010	Fleming				
2010/0203936	A1	8/2010	Levy				
2010/0279764	A1	11/2010	Allen et al.				
2010/0296511	A1	11/2010	Prodan				
2011/0016224	A1	1/2011	Riley				

US 11,451,883 B2

Page 7

(56)

References Cited

U.S. PATENT DOCUMENTS

2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102	A3 6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999
JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01/039506	A2 5/2001
WO	01/65743	A1 9/2001
WO	02/03698	A1 10/2002
WO	2005064506	A1 7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007
WO	2007016575	2/2007

WO	2007041667	4/2007
WO	2008027811	A2 3/2008
WO	2008115858	A1 9/2008

OTHER PUBLICATIONS

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6.html.

"On the Performance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020, <http://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQSQS7M3GD>.

Gambling Commission, "Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcommission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.

Sipko et al., "Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," in Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from, <http://www.winviewgames.com/press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.

The International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasy sport—Wikipedia.pdf, [https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969\(Year:2015\)](https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015)).

* cited by examiner

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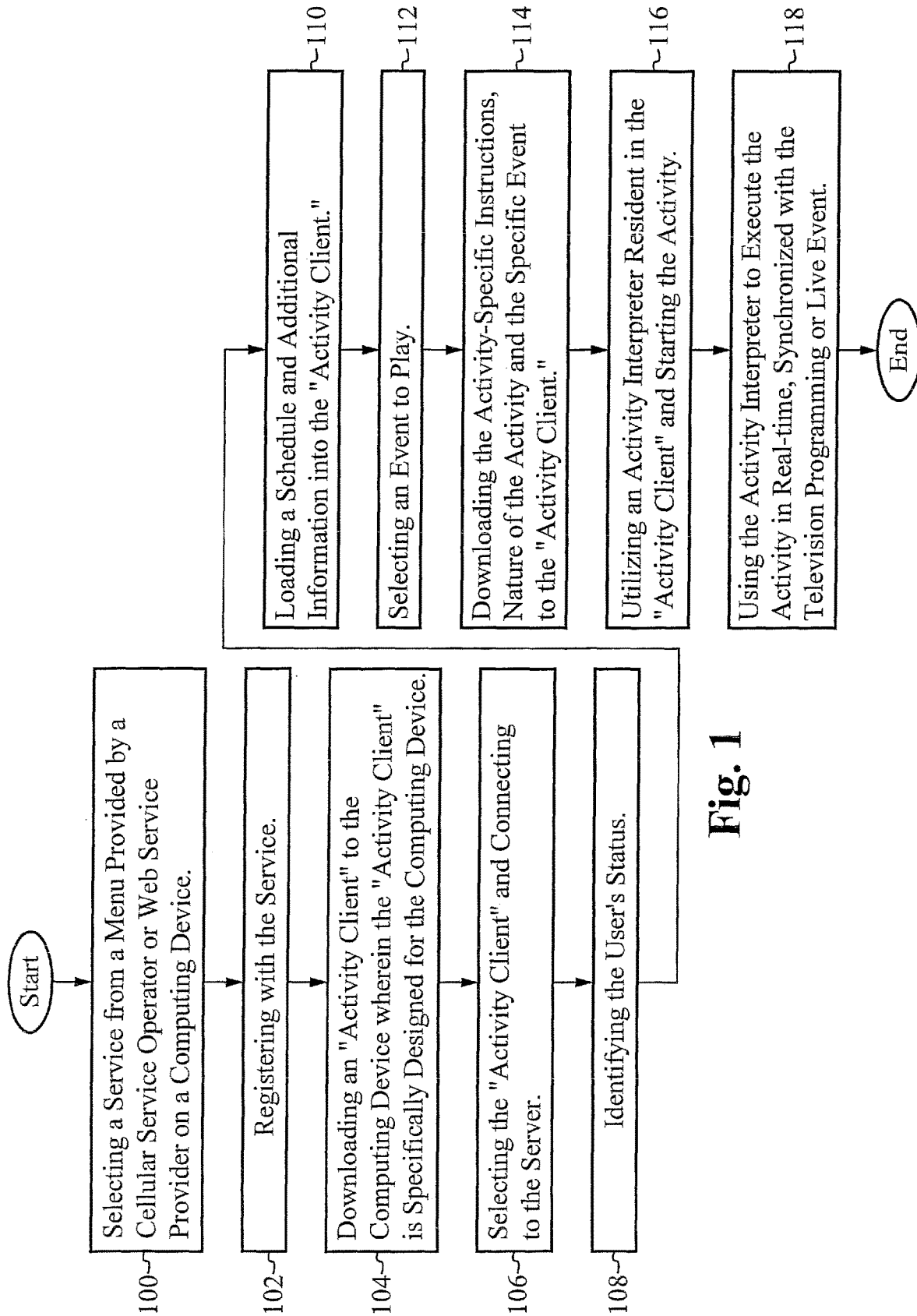


Fig. 1

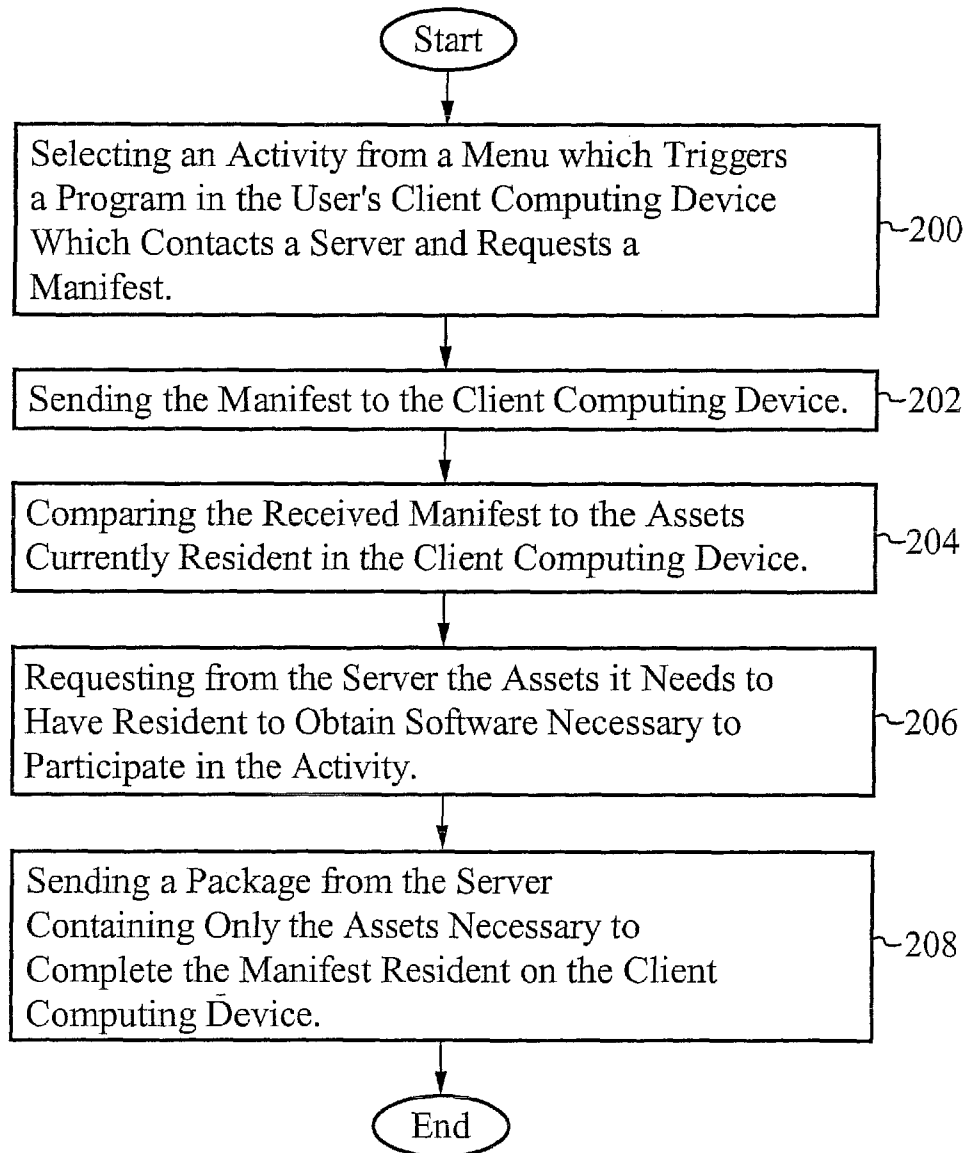


Fig. 2

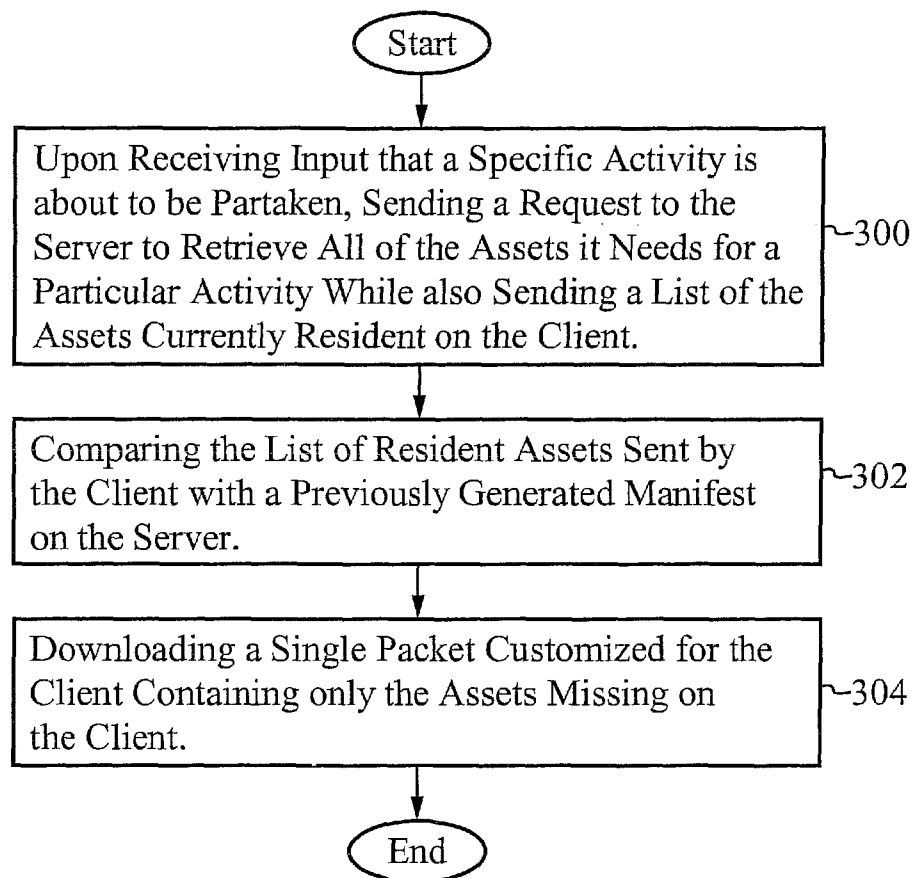


Fig. 3

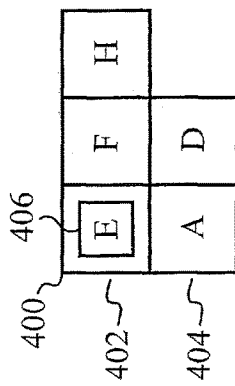


Fig. 4

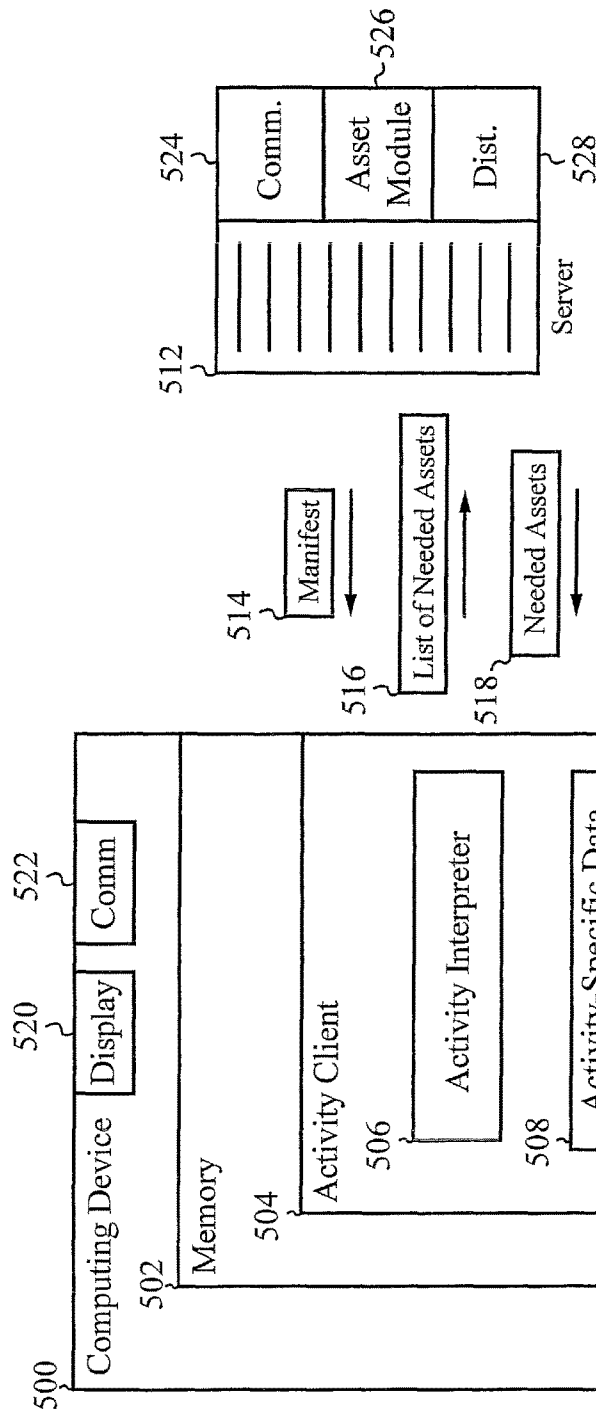


Fig. 5

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**METHOD OF AND SYSTEM FOR
MANAGING CLIENT RESOURCES AND
ASSETS FOR ACTIVITIES ON COMPUTING
DEVICES**

RELATED APPLICATION(S)

This Patent Application is a continuation of co-pending U.S. patent application Ser. No. 16/216,885, filed Dec. 11, 2018, entitled METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES which is a continuation-in-part of U.S. patent application Ser. No. 14/997,352, filed on Jan. 15, 2016, entitled METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES which is a continuation of U.S. patent application Ser. No. 14/260,480, filed on Apr. 24, 2014, entitled METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES which is a continuation of U.S. patent application Ser. No. 11/472,241, filed on Jun. 20, 2006, entitled METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES, now U.S. Pat. No. 8,738,694, which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled SYSTEMS AND METHODOLOGIES ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entirety.

This application is related to co-pending U.S. patent application Ser. No. 11/298,901, filed on Dec. 9, 2005 and entitled "A GAME OF SKILL PLAYED BY REMOTE PARTICIPANTS UTILIZING WIRELESS DEVICES IN CONNECTION WITH A COMMON GAME EVENT" and co-pending U.S. patent application Ser. No. 11/166,596, filed on Jun. 24, 2005 and entitled "METHODS AND APPARATUS FOR DISTRIBUTED GAMING OVER A MOBILE DEVICE" which claims priority under 35 U.S.C. § 119(e) of the co-pending U.S. Provisional Patent Application Ser. No. 60/588,273, filed Jul. 14, 2004 and entitled "A METHODOLOGY FOR PROVIDING ALL CONTESTANTS IN GAMES OF SKILL PLAYABLE ON CELL PHONES WITH THEIR CURRENT STANDING WHILE RECEIVING GAME CONTROL INFORMATION ONE-WAY VIA A 'BROADCAST' TRANSMISSION," which are all incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed entertainment. More specifically, the present invention relates to the field of distributed entertainment utilizing a computing device where the entertainment corresponds to an event.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cell phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda et al., companies are able to now use the cell phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the

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quarterback may call on the next play. In addition, games of skill with a common start time can be conducted simultaneously among cell phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, elements of chance must be virtually non-existent in such games and the winners therefore determined by the relative skill, experience and practice of the player in each discrete game. In certain jurisdictions and under certain circumstances, simultaneous games of chance can be conducted using the same technology as games of skill.

Although the ability to play games and enjoy other activities corresponding to current events on cell phones exists, there are a number of issues regarding coordinating the games across a nationwide network. Cellular networks and other networks are only able to handle a limited amount of traffic, so when millions of participants utilize the network at the same time for a regularly scheduled event, there are concerns of the network being overloaded and bogged down to a point where users do not receive necessary data in a timely manner.

Furthermore, cell phones and other computing devices have their own limitations as well. Although cell phone memory is increasing as is typical with technology, cell phones still have a limited amount of memory. Moreover, many users still have somewhat older cell phones that have less memory than current models. In addition to the memory limitations, there are multiple cell phone service providers and a plethora of cell phone models using slightly different protocols. Cell phone users are also sensitive to the time it takes to download the necessary data to play games or enjoy activities.

Servers of the entertainment provider also have limited resources yet must be able to ensure the potentially millions of simultaneous users have the necessary and proper software resident on their cell phones in order to participate in scheduled interactive programs. Again, servers are continuously growing more powerful, quicker and more stable; however there is still potential to overload a server with excessive traffic.

Additionally, other aspects of a nationwide service generate potential issues such as multiple time zones, differing timing and channels of television programs and separate state laws.

SUMMARY OF THE INVENTION

A method of and system for enabling a distributed entertainment system over a computing device is described herein. When implementing a distributed entertainment system wherein the entertainment system is directly correlated to live events or televised programs, there are a number of issues that must be addressed such as differing timing and channels of television programs and separate state laws. Furthermore, there are a plethora of varying computing device models possibly requiring model-specific software. An "Activity Client" is provided to handle such concerns. Furthermore, since time is of the essence for activities based on live or televised events, it is necessary to ensure a computing device is able to receive the necessary updates for the program before the event begins. By providing only the needed components instead of entire data packages, the present invention is able to much more efficiently prepare users' computing devices in time.

In one aspect, a method of implementing an entertainment service on computing devices comprises downloading an activity client to a computing device, loading a set of event

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information to the activity client, selecting an event to participate in from a list of possible events, downloading a set of activity-specific information from a server to the computing device and executing an application corresponding to the event on the computing device. The activity client is a program for managing activity information and data. The method further comprises selecting and registering with a television-related service. The method further comprises identifying a user status. Identifying the user status includes identifying a geographic location of the computing device. The activity client is specifically designed for the computing device. Executing the application is in real-time, synchronized with the event. The set of event information includes a schedule of available events. The schedule of available events includes a name of a television event, identification of an activity to be played with the television event, a television network and local channel offering the television event, a duration of the television event and information relating to nature of a prize related to the television event. The method further comprises displaying the set of event information. The set of event information is continually broadcast from the server and received at the computing device. The set of activity-specific information includes activity-specific instructions and information related to nature of the activity and event. An activity interpreter resident in the activity client is used to execute the application. The activity interpreter combines the activity, event and device instructions to execute the activity in real-time. The application is selected from the group consisting of a game, a survey and a poll. The computing device is a wireless device. The computing device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device. The method further comprises receiving a list of assets from the server, comparing the list of assets with a first set of assets on the computing device and receiving only a second set of assets within the list of assets that are not already resident on the computing device. The method further comprises improving efficiency by prioritizing the second set of assets. The second set of assets are grouped into a set of necessary assets and a set of preferred assets.

In another aspect, a method of receiving data on a client device to participate in a specific interactive event comprises receiving a list of assets from a server, comparing the list of assets with the assets on the client device and receiving only the assets within the list of assets that are not already resident on the client device. The method further comprises selecting an activity corresponding to an event from a menu of events. The activity is a game. The method further comprises requesting the list of assets from the server that are required to participate in the specific interactive event. The list of assets are sent from the server. The method further comprises requesting the assets not already on the client device. The method further comprises improving efficiency by prioritizing the assets. The assets are grouped into a set of necessary assets and a set of preferred assets. The client device is a wireless device. The client device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device.

In another aspect, a method of receiving data on a client device to participate in a specific interactive event comprises sending a request to a server from a client device to retrieve assets needed for an activity and concurrently sending a list of the assets currently resident on the client, comparing the list of resident assets sent by the client with a previously

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generated list of assets on the server and downloading a packet customized for the client containing only the assets missing on the client. The method further comprises improving efficiency by prioritizing the assets. The assets are grouped into a set of necessary assets and a set of preferred assets. The client device is a wireless device. The client device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device.

In yet another aspect, a system for receiving data to participate in a specific interactive event comprises a server and a client device coupled to the server for receiving a set of activity-specific data from the server wherein the client device comprises a memory for storing an activity client. The activity client is a program for managing activity information and data. The activity client further comprises an activity interpreter. A list of assets are utilized to determine which assets are downloaded to the activity client. A set of necessary assets are downloaded to the client device. The client device is a wireless device. The client device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device.

In another aspect, a client device comprises a communication interface, an activity client for receiving activity information through the communication interface and a display for displaying the activity information received by the activity client. The activity client is a program for managing activity information and data. The activity client further comprises an activity interpreter. The activity client receives a set of assets related to an application. The application is selected from the group consisting of a game, a survey and a poll. A list of assets are utilized to determine which assets are downloaded to the activity client. Only a set of necessary assets are downloaded to the activity client. The client device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device. The activity information comprises a schedule of upcoming events, is device-specific, is geographic-specific and is activity-specific. A user navigates and selects an event from the schedule of upcoming events.

In another aspect, a server device is configured to communicate with client devices in a plurality of locations wherein the server device provides location-specific activity information to the client devices, wherein the client devices each store an activity client. The server device comprises a communications interface for communicating with the client devices, an asset module for determining which assets each client device needs and a distributing module for sending the assets needed to each client device. The activity client is a program for managing activity information and data. The activity information comprises a schedule of upcoming events. The schedule of upcoming events is activity-specific. The schedule of upcoming events is device-specific. A user navigates and selects an event from the schedule of upcoming events. The server device stores a list of assets required for the client devices to run an application. The server device sends the list of assets to the client devices. The server device sends only requested assets for each client device of the client devices. The server device compares the list of assets with a list of client assets after each client device of the client devices sends the list of client assets to the server device. The server device sends only assets in the list of assets that are not in the list of client assets for each client device of the client devices.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of an embodiment of utilizing an "Activity Client" to ensure a cell phone or other computing device is properly configured.

FIG. 2 illustrates a flowchart of an embodiment of implementing a manifest to determine needed assets for a client computing device.

FIG. 3 illustrates a flowchart of an alternative embodiment of implementing a manifest to determine needed assets for a client computing device.

FIG. 4 illustrates an exemplary manifest of the present invention.

FIG. 5 illustrates a block diagram of an embodiment of the present invention.

DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENT

A system for and method of implementing a nationwide entertainment service on computing devices and handling the issues described above are described herein. In some embodiments, the entertainment service is subscription-based. The computing devices include, but are not limited to, set-top boxes, personal computers, gaming consoles, laptop computers, cell phones, PDAs and combination devices such as cell phone/mp3 players.

There are over 200 separate television programming areas across the country. The programming offerings available depend on each individual's physical location. There are hundreds of different printed versions of the "TV Guide," and the same television programs will be viewed at different times and on different television channels depending on what Designated Market Area (DMA) a consumer is located in. Thus, the schedule of events for one person might be entirely different from another person located just a few miles away. Monthly and trial subscribers must be informed in advance which television programs will have games or other activities offered by the service concurrent with their telecast. For example, Jeopardy might start at 4 PM ET on Channel 7 in San Francisco, but in Chicago it starts at 6 PM ET on Channel 5, and 7 PM ET on Channel 13 in New York.

Furthermore, the schedules are continuously changing. The activity schedule changes often and must be updated by adding new activities as well as dropping activities which are based on TV programs that have finished airing or are too far into the program to allow entry.

Immediate entry into activities is also required, since time is of the essence in getting all of the required information processed and downloaded to the client. Moreover, since many contests or competitions are of short duration, a competitor might be put at a disadvantage if opportunities to earn points which determine the winners of prizes are missed at the start of the contest, therefore users must be permitted entry possibly seconds before the beginning of a contest, specifically a TV program-based contest. For other activities, such as surveys, time is not necessarily of the essence, but it is still beneficial to users, if they do not have long wait times before participating in an activity. As is described further below, an improved method is described to ensure users have the necessary components of the activity application residing in the memory of the cell phones or computing devices in time to play an activity from its beginning.

The legality of awarding prizes is based on 50 separate state laws. For example, Nevada and Utah have very different gaming laws. When games of skill are offered, each

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state's laws will define what constitutes a legal game of skill. The same game playable for prizes by a user at one location is not necessarily legal for a user across a state line which might be across the street. It is incumbent upon the entertainment service operator to abide by the laws in each of the jurisdictions where it has users.

Different software is occasionally needed for different makes and models of computing devices such as cell phones. A nationwide entertainment service has a universe of potential users who will utilize a wide variety of makes and models of cell phones. Many of these devices will have different capabilities and requirements regarding display, memory, user interface, and other technical requirements to operate the software necessary to provide such an entertainment service. Therefore, slightly different software is likely required for each separate make and model of a user's device.

A typical subscriber is able to play dozens of different TV-related activities in a week, including football, baseball, Wheel of Fortune™, The Apprentice™ and others. Most makes and models of cell phones have significant limitations on the amount of useable memory for storing downloadable application software. Therefore, a subscriber's cell phone should not be expected to hold in the temporary or permanent memory all of the software capable of running dozens of separate and discreet activity applications which might be offered by such an entertainment service. Minimizing and managing the amount of memory required to fully enjoy the entertainment service is essential.

The present invention utilizes a software application, referred to as an "Activity Client." The "Activity Client" is retained in a user's computing device's memory. A variety of methodologies are implemented for downloading the "Activity Client" into memory of the cell phone or other computing device utilized. In an embodiment, the "Activity Client" is preloaded prior to purchase by a manufacturer or carrier. In an alternative embodiment, in order to initiate the service, a subscriber once registered, selects the company's "Activity Client" from a menu on the cell phone or other computing device from a list of activities, games and other entertainment services offered by a wireless service provider such as Verizon™ Wireless or Sprint™. In some embodiments, if the activity is to be participated other than on a trial basis, registration and billing arrangements with the service will be accomplished either on the company's internet site, or by inputting registration information utilizing the cell phone or other computing device.

Upon selecting the company's service from this menu, a data connection is made to either the cellular service provider or the company's server, and the "Activity Client" is downloaded to the user's cell phone or other computing device. An example protocol implemented is TCP. In the cell phone embodiment, the process of downloading the "Activity Client" is similar to the current methods whereby discrete cell phone activities are selected, downloaded, and previewed or purchased.

In some embodiments, the downloaded "Activity Client" resides in the cell phone's compact flash memory. When the user subsequently launches the "Activity Client" on his/her cell phone or other computing device, a data connection is made to a server. After the user is authenticated and their entitlement level has been determined, the authorized and geographic-specific schedule of events is sent down to his/her phone. Using this approach, the schedule is continuously updated while the "Activity Client" is active.

The "Activity Client" in its default mode, utilizes the LCD on the cell phone to display the entertainment begin-

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ning with the next scheduled activities yet to start, generally on the half hour. Since the registration process provides the service provider with the make and model of each user's phone, all "Activity Client" downloads are specific for that phone and service. Thus, for example, if a user downloads the "Activity Client" to his Samsung phone on a Verizon Wireless network, subsequent downloads to that phone will function properly as they are specifically designed for that phone.

To address the issue of numerous programming areas across the country, in one embodiment, the legally mandated ability of the cellular networks to accurately identify the physical location of every cell phone is utilized. Alternatively, and when using computing devices other than a cell phone, other information is utilized to locate the user, such as area code, zip code, or the billing address provided by the user. Based on the information acquired or provided, the server selects the specific schedule of activities, along with start times and TV channel designation for the location for this particular user. The scheduling information is downloaded into a template residing in the "Activity Client." For example, a user located in the Indianapolis, Ind. television DMA might receive a schedule which includes 9:00 pm Monday Night Football, ABC, Channel 13.

In an alternative embodiment, another methodology is utilized wherein specific scheduling information is continually broadcast to all of the users' phones, either utilizing SMS messages to "wake" the phone or, by utilizing a 3G "always on" multicast to update the schedule continually without user intervention, as long as the user's telephone is powered on.

The server, when determining the location of the cell phone, also accesses information concerning each specific activity offered as to whether or not it has been determined that the activity meets the applicable state law requirements of the game of skill for each particular participant. The user is then informed as to whether or not a prize will be offered to the competitors in this activity from their location.

In addition to containing software for enabling the continual receipt and updating of schedules and activity playing information specific to each user's geographic location, the "Activity Client" has the ability to receive and hold downloaded activity-specific data instructions from the server. Thus, when a specific activity is selected for play by the user, for example, Monday Night Football™, Wheel of Fortune™, or Major League Baseball™, the server downloads the activity-specific instructions into a memory space provided for this purpose in the "Activity Client." These activity-specific data instructions are based on the specific genre such as football, specific event such as San Francisco 49ers vs Dallas Cowboys and the specific computing device such as a wireless mobile device such as Sanyo™ 4300. Thereafter, the specific activity instructions temporarily reside inside the "Activity Client" until the next activity playing session, where it is replaced by different activity-specific data instructions selected by the user.

In an alternative embodiment, the system described herein is used to schedule and control duplicate activities of skill or chance with a common scheduled start time, played simultaneously, which are self contained, for example, not related to a television program. Examples of such include a trivia game, or classic card, dice, word games or games based on television clips.

FIG. 1 illustrates a flowchart of an embodiment of utilizing an "Activity Client" to ensure a cell phone or other computing device is properly configured. In the step 100, a user selects from a menu provided by his web service

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provider or cellular service operator, for example, Verizon Wireless™, Cingular™, or Sprint™, the TV related subscription service or other service. In the step 102, the user registers with the subscription service when necessary. For some activities, registration is required, but for others, registration is optional or not even available. After registration, if necessary, the user receives a downloaded "Activity Client" into his cell phone or other computing device, specific to the device's make and model in the step 104. In the step 106, to access the entertainment service, the "Activity Client" is selected by the user from the menu, and the device connects via the cellular network and/or Internet to the service provider's server. Alternatively, after the "Activity Client" is downloaded, the device automatically connects to the server. In the step 108, the server identifies the user's status as a "trial" subscriber, "ad hoc" competitor, or "full monthly" subscriber, and identifies the specific geographic location of the user. In the step 110, a current schedule of all available events, by name of event, TV network and channel offered, duration of event, and the nature of the prize, and where appropriate, information that indicates that the activity is able to be played for a prize in the user's locale or not, is loaded into the "Activity Client" and displayed on the device's LCD. In an alternative embodiment, once the "Activity Client" is resident on the user's device, scheduling information is continually "pushed" or "broadcast" and passively received and updated on the "Activity Client" so that it is instantly accessed, current and up to the minute. In the step 112, the user selects the event he/she desires to play along with from a variety of possibilities presented on the device. In the step 114, the "Activity Client" software connects to the company's server, and the activity-specific instructions for a specific device, the nature of the activity, and the specific event are downloaded into the "Activity Client." In the step 116, the "Activity Client" then utilizes the activity interpreter resident in the "Activity Client" and starts the activity application. In the step 118, the activity interpreter that resides in the "Activity Client" combines the activity, event, and device instructions and uses these data instructions to execute the activity application as it unfolds in real-time, synchronized with the television programming or live event being viewed by the user.

Additionally, managing different types of software assets or components required by different models of computing devices such as cell phones offered by a variety of cellular carriers or web service providers is described herein. To successfully participate in an activity of skill, based on a television show or live event, a user's cell phone needs specific software to manage, for example, the images displayed on the LCD display, the sound effects utilized by the activity, the activity scripts, the advertising copy and images which are displayed interstitially during the activity, and event-specific data generated in real-time and synchronized with the unfolding of a television show or live event. Complexity is further compounded by the fact that the assets change in minor or major part from activity to activity. For example, from football to baseball to Jeopardy™, there are changes to these assets. Some cellular phones are able to retain some or all of the assets in the phone's memory if the activity to be played was the last activity partaken by a user. Other phones retain some or part of the assets which are common to different genres of activities. Yet other phones retain none of the assets. For example, a first time user or frequent user whose assets were replaced by an upload for a different genre of activity would likely have none of the assets.

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Regardless of what type of device is used and on which-
ever service, the present invention ensures that the applica-
tion in each user's device receives all of the specific assets
necessary for that particular genre of activity for a specific
scheduled event while minimizing capacity and latency
issues by assuring that only the necessary assets which are
not resident on the device for the event are delivered on a
timely basis to each cell phone. By using an implementation
that only sends necessary missing data, less information
needs to be transferred therefore there is less traffic conges-
tion, and users are able to receive the necessary components
on time.

Although a cell phone is used in the example above, the
present invention is not limited to cell phones. As described
above and below, the present invention is applicable to a
variety of computing devices in addition to cellular tele-
phones.

FIG. 2 illustrates a flowchart of an embodiment of imple-
menting a manifest, which is a list of assets, to determine
needed assets for a client computing device. In the step 200,
a user selects an activity from a menu which triggers a
program in the user's client computing device which con-
tacts a server and requests a manifest of assets, from the
server, that are required to participate in a specific interactive
event. The server then sends the manifest to the client, in the
step 202. In the step 204, the client then compares the
received manifest to the assets currently resident in the
computing device. The client then requests from the server
the assets it needs to have resident in the client to obtain a
full compliment of required software necessary to partici-
pate in the activity, in the step 206. The server then sends a
package containing only the assets necessary to complete the
manifest resident on the client computing device in the step
208.

FIG. 3 illustrates a flowchart of an alternative embodi-
ment of implementing a manifest to determine needed assets
for a client computing device. Upon receiving input that a
specific activity is about to be undertaken, the client sends
a request to the server to retrieve all of the assets it needs for
a particular activity while also sending a listing of the assets
currently resident on the client, in the step 300. The server
having previously generated the manifest for the event, then
compares the list of resident assets sent with the request in
the step 302, and then downloads a single packet customized
for the client containing only the assets missing on the client,
in the step 304.

FIG. 4 illustrates an exemplary manifest of the present
invention. Assets listed in a manifest 400, range in necessity
from those that are absolutely required to those that are
preferable. To further improve efficiency when delivering
components to a user's computing device, the manifest 400
is able to prioritize the assets for the client device to resolve.
In some embodiments, the manifest groups the assets into
two sets of assets: a first set 402 of required assets and a
second set 404 of preferable assets. Furthermore, the assets
within each group are able to be ordered utilizing priorities
ensuring that the most important assets in the group are first.
For example, the server sends the following list of assets
required for an event—A, D, and (E, F and H). The assets
(E, F and H) are grouped in the response so that the client
knows that at least one of them is necessary for the client to
join the event. Additionally, the order in which the assets are
listed is able to provide additional information to the client
device about their priority. For instance, in the example
above, the asset E is the most preferred asset 406, then F and
finally H within the first set 402 of required assets. If the
client has none of the assets, it is able to only request E,

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depending on the current constraints such as time remaining
before the start of the event, the size of the memory on the
client device and other similar considerations. Although the
manifest used in the example above only has two levels and
five total assets, the size of the manifest is able to be
modified as desired. If three levels of groupings are pre-
ferred, then that hierarchy is able to be implemented. Fur-
thermore, more or less than five assets are able to be
included within the manifest, as appropriate.

By minimizing the amount of temporary memory utilized
for each application in the client, the time necessary to load
the software to play an event is decreased, and the memory
of each client is used more efficiently. Thus, the server is
able to minimize this overhead by only sending the assets
which the client specifically needs for a specific application
at a specific time. In one embodiment, the client is provided
flexibility in terms of managing the assets it needs for the
activities. In another embodiment, the processing that needs
to be performed by the client is minimized.

FIG. 5 illustrates a block diagram of an embodiment of
the present invention. A computing device 500 such as a
set-top box, personal computer, gaming console, laptop
computer, cell phone, PDA or combination cell phone/mp3
device includes a memory 502 for storing data. As described
above, the memory 502 varies in size depending on the type
and brand of computing device, where more recently pro-
duced computing devices have larger memories and are thus
able to store more data. However, older computing devices
only store a minimal amount of data. Within the memory an
"Activity Client" 504 is stored for receiving activity-specific
data 508. The activity-specific data 508 includes instructions
for a specific computing device, the nature of the activity
and the specific event. By utilizing a manifest 514 received
from a server 512, wherein the manifest 514 includes assets
for running the activity, the computing device 500 is able to
efficiently retrieve the activity-specific data 508. A list of
needed assets 516 by the computing device 500 is sent from
the computing device 500 back to the server 512. Then, the
necessary assets 518 are downloaded to the memory 502 of
the computing device 500. An activity interpreter 506 within
the "Activity Client" utilizes the activity-specific data 508 to
start the activity application by combining the activity, event
and device instructions and executing the activity in real-
time. The computing device 500 also includes a display 520,
a communication interface 522 and other standard compo-
nents necessary for proper functionality. The server 512 also
includes a communications interface 524 for communicating
with the client device 500, an asset module 526 for deter-
mining which assets the client device 500 needs and a
distributing module 528 for sending the assets needed to the
client device 500.

The present invention is applicable to any communicating
computing devices such as set-top boxes, personal comput-
ers, gaming consoles, laptop computers, cell phones, PDAs
and combination devices such as cell phone/mp3 players.
The computing devices must have access to a network, but
are able to be wired or wireless. The computing devices also
are able to be mobile or stationary. Furthermore, the network
is able to include a cellular network, a web-based network
or any other information sharing network.

The activities that are able to be participated in utilizing
the present invention include, but are not limited to, games,
polls, surveys, and other interactive activities.

In one specific embodiment, a user utilizes a wireless
device, such as a cell phone to subscribe to an interactive
gaming service. The user then registers with the service and
downloads an "Activity Client" into the cell phone where

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the "Activity Client" is specifically configured for that type of cell phone. Then, the cell phone connects through the cellular network and Internet to a game server. The game server identifies the user's status including the specific geographical location. A current schedule of all available events, by name of TV event, identification of the game to be played with the TV event, TV network and channel offered, duration of event, and the nature of the prize is then downloaded to the "Activity Client." After a user views the schedule and other information, the user is able to select the event they want to play along with. Then, the "Activity Client" connects to the game server and game-specific data is downloaded. In instances where some of the game-specific data is already downloaded in the cell phone's memory, only those assets that are not already there are downloaded. Preferably, necessary assets are downloaded first and then preferred assets are downloaded. This ensures that a user will be able to play along with the game on time. Then, the "Activity Client" utilizes the game interpreter resident to start the game. The game interpreter also combines the game, event and device instructions to execute the game in real-time while synchronized with the television programming.

The present invention is also intended to apply to any kind of application software which utilizes a variety of assets, where some of the assets are maintained on a remote server such as playing video games, listening to music and web browsing.

To utilize the present invention, a user has a computing device, such as a cell phone, or other appropriate computing device with which he is able to subscribe to an interactive entertainment service. The user then registers with the service and downloads an "Activity Client" into the computing device where the "Activity Client" is specifically configured for that type of device. Then the computing device connects through to a server. The server identifies the user's status including the specific geographical location. A current schedule of all available events, by name of TV event, identification of the activity to be played with the TV event, TV network and channel offered, duration of event, and the nature of the prize is then downloaded to the "Activity Client." After a user views the schedule and other information, the user is able to select the event they want to play along with. Then, the "Activity Client" connects to the server and activity-specific data is downloaded. In instances where some of the activity-specific data is already downloaded in the computing device's memory, only those assets that are not already there are downloaded. Preferably, necessary assets are downloaded first and then preferred assets are downloaded. This ensures that a user will be able to play along with the activity on time. Then, the "Activity Client" utilizes the activity interpreter resident to start the activity. The activity interpreter also combines the activity, event and device instructions to execute the activity in real-time while synchronized with the television programming.

In operation, a user is able to use his cell phone or other computing device to enjoy interactive entertainment. For example, the user scrolls through the menus and selects the interactive entertainment desired to be played. Thereafter, downloads occur, and instructions and options are displayed on the display so that a user is able to read about and determine which interactive entertainment he wants to play. After selecting the activity, again further downloads occur to ensure the proper components are installed on the user's computing device. For example, if it is a Sunday afternoon at 12:50 PM PT, and a user in San Francisco, Calif. sees that the San Francisco 49ers are playing the Oakland Raiders at

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1:00 PM PT, he is able to select that activity to play. The user also watches the activity on television. In other embodiments, the activity is watched on other devices such as a computer, the cell phone or computing device itself, or live. At 1:00 PM PT, when the activity starts, the user is able to interactively play along with what he is viewing by predicting aspects of the activity.

Although a cell phone has been used throughout the present specification as the main exemplary computing device, it should be understood that any computing device is able to be used within the described method and system.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of implementing a consumer service on a mobile Internet-connected computing device comprising:

loading a set of service related information located on a server to an activity client;

selecting an option from the activity client from a list of available options;

downloading a set of service-specific information related to a selected option from the server to the mobile Internet-connected computing device;

executing an application related to the selected option within the activity client on the mobile Internet-connected computing device;

receiving a list of assets necessary for executing the application from the server, wherein the assets necessary for executing the application directly affect the operation of the application;

comparing the list of assets with a first set of assets on the mobile Internet-connected computing device; and receiving only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device.

2. The method of claim 1 wherein receiving only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

3. The method of claim 1 further comprising improving efficient utilization of memory capacity by prioritizing the second set of assets.

4. The method of claim 1 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

5. The method of claim 1 wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be loaded, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

6. The method of claim 5 wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

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7. The method of claim 6 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

8. The method of claim 1 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

9. The method of claim 1 wherein the server is located remotely from the mobile Internet-connected computing device.

10. The method of claim 1 wherein the assets are prioritized by frequency of use by a user.

11. The method of claim 1 wherein the assets are prioritized based on prior usage by a plurality of users.

12. The method of claim 1 wherein the assets are prioritized based on user selected parameters.

13. The method of claim 12 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

14. The method of claim 1 wherein the assets are prioritized by a service provider of the consumer service.

15. The method of claim 1 wherein the assets are prioritized based on legal requirements at a current location of a user.

16. The method of claim 1 wherein the assets are prioritized based on a user profile maintained on the server.

17. The method of claim 1 wherein the assets are delivered based on a current state of the consumer service.

18. The method of claim 1 further comprising replacing unused assets to manage memory on the mobile Internet-connected computing device.

19. The method of claim 1 further comprising purging unused assets to manage memory on the mobile Internet-connected computing device.

20. A method of implementing a consumer service with a server comprising:

transmitting a set of service related information to an application;
receiving a selection related to the consumer service;
transmitting a set of selection information related to the selection from the server to a mobile Internet-connected computing device;
receiving additional information based on a user's execution of the application on the mobile Internet-connected computing device;
transmitting a list of assets necessary for executing the application, wherein the assets necessary for executing the application directly affect the operation of the application; and
transmitting only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device.

21. The method of claim 20 wherein transmitting only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

22. The method of claim 20 further comprising comparing the list of assets with a first set of assets on the mobile Internet-connected computing device.

23. The method of claim 20 further comprising comparing the list of assets with a first set of assets on the server.

24. The method of claim 20 further comprising improving efficient utilization of memory capacity by prioritizing the second set of assets.

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25. The method of claim 20 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

26. The method of claim 20 wherein the geographic location of the mobile Internet-connected computing device determines the set of service related information to be transmitted, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

27. The method of claim 26 wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

28. The method of claim 27 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

29. The method of claim 20 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

30. The method of claim 20 wherein the server is located remotely from the mobile Internet-connected computing device.

31. The method of claim 20 wherein the assets are prioritized by frequency of use by a user.

32. The method of claim 20 wherein the assets are prioritized based on prior usage by a plurality of users.

33. The method of claim 20 wherein the assets are prioritized based on user selected parameters.

34. The method of claim 33 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

35. The method of claim 20 wherein the assets are prioritized by a service provider of the consumer service.

36. The method of claim 20 wherein the assets are prioritized based on legal requirements at a current location of a user.

37. The method of claim 20 wherein the assets are prioritized based on a user profile maintained on the server.

38. The method of claim 20 wherein the assets are delivered based on a current state of the consumer service.

39. The method of claim 20 further comprising replacing unused assets to manage memory on the mobile Internet-connected computing device.

40. The method of claim 20 further comprising purging unused assets to manage memory on the mobile Internet-connected computing device.

41. A server device comprising:

a memory configured to store an application, the application configured to:
transmit a set of service related information to a mobile device application;
receive a selection related to a consumer service;
transmit a set of selection information related to the selection from the server to a mobile Internet-connected computing device;
receive additional information based on a user's execution of the mobile device application on the mobile Internet-connected computing device;
transmit a list of assets necessary for executing the consumer service, wherein the assets necessary for executing the consumer service directly affect the operation of the consumer service; and

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transmit only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device; and a processor configured to process the application.

42. The server device of claim 41 wherein only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device are transmitted by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

43. The server device of claim 41 wherein the application is further configured to compare the list of assets with a first set of assets on the mobile Internet-connected computing device.

44. The server device of claim 41 wherein the application is further configured to compare the list of assets with a first set of assets on the server.

45. The server device of claim 41 wherein the application is further configured to improve efficient utilization of memory capacity by prioritizing the second set of assets.

46. The server device of claim 41 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

47. The server device of claim 41 wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be transmitted, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

48. The server device of claim 47 wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

49. The server device of claim 48 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

50. The server device of claim 41 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

51. The server device of claim 41 wherein the server is located remotely from the mobile Internet-connected computing device.

52. The server device of claim 41 wherein the assets are prioritized by frequency of use by a user.

53. The server device of claim 41 wherein the assets are prioritized based on prior usage by a plurality of users.

54. The server device of claim 41 wherein the assets are prioritized based on user selected parameters.

55. The server device of claim 54 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

56. The server device of claim 41 wherein the assets are prioritized by a service provider of the consumer service.

57. The server device of claim 41 wherein the assets are prioritized based on legal requirements at a current location of a user.

58. The server device of claim 41 wherein the assets are prioritized based on a user profile maintained on the server device.

59. The server device of claim 41 wherein the assets are delivered based on a current state of the consumer service.

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60. The server device of claim 41 wherein the application is further configured to replace unused assets to manage memory on the mobile Internet-connected computing device.

61. The server device of claim 41 wherein the application is further configured to purge unused assets to manage memory on the mobile Internet-connected computing device.

62. A device comprising:

a memory configured to store an application, the application configured to:

load a set of service related information located on a server to an activity client;

select an option from the activity client from a list of available options;

download a set of service-specific information related to a selected option from the server to the device;

execute the application related to the selected option within the activity client on the device;

receive a list of assets necessary for executing the application from the server, wherein the assets necessary for executing the application directly affect the operation of the application;

compare the list of assets with a first set of assets on the device; and

receive only a second set of assets within the list of assets that are not already resident on the device; and a processor configured to process the application.

63. The device of claim 62 wherein receiving only the second set of assets within the list of assets that are not already resident on the device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

64. The device of claim 62 wherein the application is further configured for improving efficient utilization of memory capacity by prioritizing the second set of assets.

65. The device of claim 62 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

66. The device of claim 62 wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be loaded, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the device.

67. The device of claim 66 wherein as the geographic location of the device changes, different service related information is presented within the application based on the geographic location.

68. The device of claim 67 wherein the geographic location of the device is determined using one or more cellular networks, GPS, GSM or other related technologies.

69. The device of claim 62 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

70. The device of claim 62 wherein the server is located remotely from the mobile Internet-connected computing device.

71. The device of claim 62 wherein the assets are prioritized by frequency of use by a user.

72. The device of claim 62 wherein the assets are prioritized based on prior usage by a plurality of users.

73. The device of claim 62 wherein the assets are prioritized based on user selected parameters.

74. The device of claim 73 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

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75. The device of claim 62 wherein the assets are prioritized by a service provider of the consumer service.

76. The device of claim 62 wherein the assets are prioritized based on legal requirements at a current location of a user.

77. The device of claim 62 wherein the assets are prioritized based on a user profile maintained on the server.

78. The device of claim 62 wherein the assets are delivered based on a current state of the consumer service.

79. The device of claim 62 wherein the application is further configured to replace unused assets to manage memory on the mobile Internet-connected computing device.

80. The device of claim 62 wherein the application is further configured to purge unused assets to manage memory on the mobile Internet-connected computing device.

81. A method of implementing a consumer service with a server comprising:

transmitting a set of service related information to an application on a mobile Internet-connected computing device;

receiving additional information based on a user's execution of the application on the mobile Internet-connected computing device;

transmitting a list of assets necessary to execute the application to the mobile Internet-connected computing device, wherein the assets necessary for executing the application directly affect the operation of the application; and

transmitting to the mobile Internet-connected computing device only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device.

82. The method of claim 81 wherein transmitting only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

83. The method of claim 81 further comprising comparing the list of assets with a first set of assets on the mobile Internet-connected computing device.

84. The method of claim 81 further comprising comparing the list of assets with a first set of assets on the server.

85. The method of claim 81 further comprising improving efficient utilization of memory capacity by prioritizing the second set of assets.

86. The method of claim 81 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

87. The method of claim 81 wherein the geographic location of the mobile Internet-connected computing device determines the set of service related information to be transmitted, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

88. The method of claim 87 wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

89. The method of claim 88 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

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90. The method of claim 81 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

91. The method of claim 81 wherein the server is located remotely from the mobile Internet-connected computing device.

92. The method of claim 81 wherein the assets are prioritized by frequency of use by a user.

93. The method of claim 81 wherein the assets are prioritized based on prior usage by a plurality of users.

94. The method of claim 81 wherein the assets are prioritized based on user selected parameters.

95. The method of claim 94 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

96. The method of claim 81 wherein the assets are prioritized by a service provider of the consumer service.

97. The method of claim 81 wherein the assets are prioritized based on legal requirements at a current location of a user.

98. The method of claim 81 wherein the assets are prioritized based on a user profile maintained on the server.

99. The method of claim 81 wherein the assets are delivered based on a current state of the consumer service.

100. The method of claim 81 further comprising replacing unused assets to manage memory on the mobile Internet-connected computing device.

101. The method of claim 81 further comprising purging unused assets to manage memory on the mobile Internet-connected computing device.

102. A server device comprising:

a memory configured to store an application, the application configured to:

transmit a set of service related information to a mobile device application on a mobile Internet-connected computing device;

receive additional information based on a user's execution of the mobile device application on the mobile Internet-connected computing device;

transmit a list of assets necessary for executing the application to the mobile Internet-connected computing device, wherein the assets necessary for executing the application directly affect the operation of the application; and

transmit to the mobile Internet-connected computing device only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device; and

a processor configured to process the application.

103. The server device of claim 102 wherein only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device are transmitted by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

104. The server device of claim 102 wherein the application is further configured to compare the list of assets with a first set of assets on the mobile Internet-connected computing device.

105. The server device of claim 102 wherein the application is further configured to compare the list of assets with a first set of assets on the server.

106. The server device of claim 102 wherein the application is further configured to improve efficient utilization of memory capacity by prioritizing the second set of assets.

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107. The server device of claim 102 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

108. The server device of claim 102 wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be transmitted, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

109. The server device of claim 108 wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

110. The server device of claim 109 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

111. The server device of claim 102 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

112. The server device of claim 102 wherein the server is located remotely from the mobile Internet-connected computing device.

113. The server device of claim 102 wherein the assets are prioritized by frequency of use by a user.

114. The server device of claim 102 wherein the assets are prioritized based on prior usage by a plurality of users.

115. The server device of claim 102 wherein the assets are prioritized based on user selected parameters.

116. The server device of claim 115 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

117. The server device of claim 102 wherein the assets are prioritized by a service provider of the consumer service.

118. The server device of claim 102 wherein the assets are prioritized based on legal requirements at a current location of a user.

119. The server device of claim 102 wherein the assets are prioritized based on a user profile maintained on the server.

120. The server device of claim 102 wherein the assets are delivered based on a current state of the consumer service.

121. The server device of claim 102 wherein the application is further configured to replace unused assets to manage memory on the mobile Internet-connected computing device.

122. The server device of claim 102 wherein the application is further configured to purge unused assets to manage memory on the mobile Internet-connected computing device.

123. A mobile Internet-connected computing device comprising:

a memory configured to store an application, the application configured to:

load a set of service related information located on a server to an activity client;

execute the application related to a selected option within the activity client on the mobile Internet-connected computing device;

receive a list of assets necessary for executing the application from the server, wherein the assets necessary for executing the application directly affect the operation of the application;

compare the list of assets with a first set of assets on the mobile Internet-connected computing device; and

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receive only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device; and
a processor configured to process the application.

124. The device of claim 123 wherein receiving only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

125. The device of claim 123 wherein the application is further configured for improving efficient utilization of memory capacity by prioritizing the second set of assets.

126. The device of claim 123 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

127. The device of claim 123 wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be loaded, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

128. The device of claim 127 wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

129. The device of claim 128 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

130. The device of claim 123 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

131. The device of claim 123 wherein the server is located remotely from the mobile Internet-connected computing device.

132. The device of claim 123 wherein the assets are prioritized by frequency of use by a user.

133. The device of claim 123 wherein the assets are prioritized based on prior usage by a plurality of users.

134. The device of claim 123 wherein the assets are prioritized based on user selected parameters.

135. The device of claim 134 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

136. The device of claim 123 wherein the assets are prioritized by a service provider of the consumer service.

137. The device of claim 123 wherein the assets are prioritized based on legal requirements at a current location of a user.

138. The device of claim 123 wherein the assets are prioritized based on a user profile maintained on the server.

139. The device of claim 124 wherein the assets are delivered based on a current state of the consumer service.

140. The device of claim 125 wherein the application is further configured to replace unused assets to manage memory on the mobile Internet-connected computing device.

141. The device of claim 126 wherein the application is further configured to purge unused assets to manage memory on the mobile Internet-connected computing device.

142. The method of claim 1 wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

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143. The method of claim 20 wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

144. The server device of claim 41 wherein the second set of assets are prioritized based on an amount of time remain- 5
ing before a start of an event.

145. The device of claim 62 wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

146. The method of claim 81 wherein the second set of 10
assets are prioritized based on an amount of time remaining before a start of an event.

147. The server device of claim 102 wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event. 15

148. The device of claim 123 wherein the second set of assets are prioritized based on an amount of time remaining before a start of the first event or the second event.

* * * * *

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Exhibit 5

(12) **United States Patent**
Lockton et al.

(10) **Patent No.:** **US 11,678,020 B2**
(45) **Date of Patent:** ***Jun. 13, 2023**

(54) **METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING**

(58) **Field of Classification Search**
CPC A63F 13/50
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , <http://www.pinnacle.com/en/belting-articles-educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD>.

(Continued)

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(57) **ABSTRACT**

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

43 Claims, 5 Drawing Sheets

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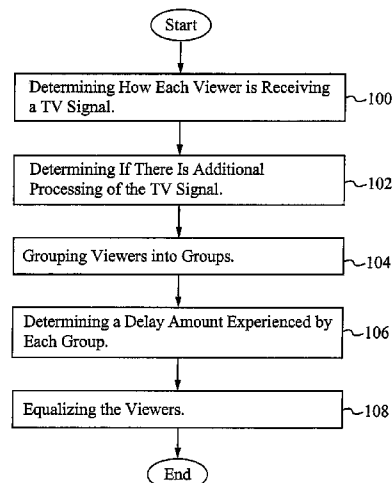
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Related U.S. Application Data

continuation of application No. 16/177,118, filed on Oct. 31, 2018, now Pat. No. 10,874,942, which is a continuation of application No. 15/900,438, filed on Feb. 20, 2018, now Pat. No. 10,150,031, which is a continuation of application No. 15/648,101, filed on Jul. 12, 2017, now Pat. No. 9,919,211, which is a continuation of application No. 15/263,186, filed on Sep. 12, 2016, now Pat. No. 9,744,453, which is a division of application No. 14/172,571, filed on Feb. 4, 2014, now Pat. No. 9,604,140, which is a continuation of application No. 13/681,172, filed on Nov. 19, 2012, now Pat. No. 8,699,168, which is a division of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530.

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(56) References Cited

U.S. PATENT DOCUMENTS

4,141,548 A 2/1979 Everton
 4,270,755 A 6/1981 Willhide et al.

4,386,377 A 5/1983 Hunter, Jr.
 4,496,148 A 1/1985 Morstain et al.
 4,521,803 A 6/1985 Glittinger
 4,592,546 A 6/1986 Fascenda et al.
 4,816,904 A 3/1989 McKenna et al.
 4,918,603 A 4/1990 Hughes et al.
 4,930,010 A 5/1990 MacDonald
 5,013,038 A 5/1991 Luvenberg
 5,018,736 A 5/1991 Pearson et al.
 5,035,422 A 7/1991 Berman
 5,073,931 A 12/1991 Audebert et al.
 5,083,271 A 1/1992 Thatcher et al.
 5,083,800 A 1/1992 Lockton
 5,119,295 A 6/1992 Kapur
 5,120,076 A 6/1992 Luxenberg et al.
 5,213,337 A 5/1993 Sherman
 5,227,874 A 7/1993 Von Kohom
 5,256,863 A 10/1993 Ferguson
 5,263,723 A 11/1993 Pearson et al.
 5,283,734 A 2/1994 Von Kohom
 5,327,485 A 7/1994 Leaden
 5,343,236 A 8/1994 Koppe et al.
 5,343,239 A 8/1994 Lappington et al.
 5,417,424 A 5/1995 Snowden
 5,462,275 A 10/1995 Lowe et al.
 5,479,492 A 12/1995 Hofstee et al.
 5,488,659 A 1/1996 Millani
 5,519,433 A 5/1996 Lappington
 5,530,483 A 6/1996 Cooper
 5,553,120 A 9/1996 Katz
 5,566,291 A 10/1996 Boulton et al.
 5,585,975 A 12/1996 Bliss
 5,586,257 A 12/1996 Perlman
 5,589,765 A 12/1996 Ohmart et al.
 5,594,938 A 1/1997 Engel
 5,618,232 A 4/1997 Martin
 5,628,684 A 5/1997 Jean-Etienne
 5,636,920 A 6/1997 Shur et al.
 5,638,113 A 6/1997 Lappington
 5,643,088 A 7/1997 Vaughn et al.
 5,663,757 A 9/1997 Morales
 5,759,101 A 6/1998 Won Kohom
 5,761,606 A 6/1998 Wolzien
 5,762,552 A 6/1998 Voung et al.
 5,764,275 A 6/1998 Lappington et al.
 5,794,210 A 8/1998 Goldhaber et al.
 5,805,230 A 9/1998 Staron
 5,813,913 A 9/1998 Berner et al.
 5,818,438 A 10/1998 Howe et al.
 5,828,843 A 10/1998 Grimm
 5,838,774 A 11/1998 Weiser, Jr.
 5,838,909 A 11/1998 Roy
 5,846,132 A 12/1998 Junkin
 5,848,397 A 12/1998 Marsh et al.
 5,860,862 A 1/1999 Junkin
 5,894,556 A 4/1999 Grimm
 5,916,024 A 6/1999 Von Kohom
 5,870,683 A 9/1999 Wells et al.
 5,970,143 A 10/1999 Schneier et al.
 5,971,854 A 10/1999 Pearson et al.
 5,987,440 A 11/1999 O'Neil et al.
 6,009,458 A 12/1999 Hawkins et al.
 6,015,344 A 1/2000 Kelly et al.
 6,016,337 A 1/2000 Pykalisto
 6,038,599 A 3/2000 Black
 6,042,477 A 3/2000 Addink
 6,064,449 A 5/2000 White
 6,104,815 A 8/2000 Alcorn et al.
 6,110,041 A 8/2000 Walker et al.
 6,117,013 A 9/2000 Elba
 6,126,543 A 10/2000 Friedman
 6,128,660 A 10/2000 Grimm
 6,135,881 A 10/2000 Abbott et al.
 6,154,131 A 11/2000 Jones, II
 6,174,237 B1 1/2001 Stephenson
 6,182,084 B1 1/2001 Cockrell et al.
 6,193,610 B1 2/2001 Junkin
 6,222,642 B1 4/2001 Farrell et al.
 6,233,736 B1 5/2001 Wolzien

US 11,678,020 B2

Page 3

(56)

References Cited

U.S. PATENT DOCUMENTS

6,251,017 B1	6/2001	Leason et al.	7,035,653 B2	4/2006	Simon et al.
6,267,670 B1	7/2001	Walker	7,058,592 B1	6/2006	Heckerman et al.
6,287,199 B1	9/2001	McKeown et al.	7,076,434 B1	7/2006	Newman et al.
6,293,868 B1	9/2001	Bernard	7,085,552 B2	8/2006	Buckley
6,312,336 B1	11/2001	Handelman et al.	7,116,310 B1	10/2006	Evans et al.
6,343,320 B1	1/2002	Fairchild	7,117,517 B1	10/2006	Milazzo et al.
6,345,297 B1	2/2002	Grimm	7,120,924 B1	10/2006	Katcher et al.
6,371,855 B1	4/2002	Gavriloff	7,124,410 B2	10/2006	Berg
6,373,462 B1	4/2002	Pan	7,125,336 B2	10/2006	Anttila et al.
6,411,969 B1	6/2002	Tam	7,136,871 B2	11/2006	Ozer et al.
6,416,414 B1	7/2002	Stadelmann	7,144,011 B2	12/2006	Asher et al.
6,418,298 B1	7/2002	Sonnenfeld	7,169,050 B1	1/2007	Tyler
6,425,828 B2	7/2002	Walker et al.	7,185,355 B1	2/2007	Ellis
6,434,398 B1	8/2002	Inselberg	7,187,658 B2	3/2007	Koyanagi
6,446,262 B1	9/2002	Malaure et al.	7,191,447 B1	3/2007	Ellis et al.
6,470,180 B1	10/2002	Kotzin et al.	7,192,352 B2	3/2007	Walker et al.
6,475,090 B2	11/2002	Gregory	7,194,758 B1	3/2007	Waki et al.
6,524,189 B1	2/2003	Rautila	7,228,349 B2	6/2007	Barone, Jr. et al.
6,527,641 B1	3/2003	Sinclair et al.	7,231,630 B2	6/2007	Acott et al.
6,530,082 B1	3/2003	Del Sesto et al.	7,233,922 B2	6/2007	Asher et al.
6,536,037 B1	3/2003	Guheen et al.	7,240,093 B1	7/2007	Danieli et al.
6,578,068 B1	6/2003	Bowma-Amuah	7,244,181 B2	7/2007	Wang et al.
6,594,098 B1	7/2003	Sutardja	7,249,367 B2	7/2007	Bove, Jr. et al.
6,604,997 B2	7/2003	Sidakovsky et al.	7,254,605 B1	8/2007	Strum
6,610,953 B1	8/2003	Tao et al.	7,260,782 B2	8/2007	Wallace et al.
6,611,755 B1	8/2003	Coffee et al.	RE39,818 E	9/2007	Slifer
6,648,760 B1	11/2003	Nicastro	7,283,830 B2	10/2007	Buckley
6,659,860 B1	12/2003	Yamamoto et al.	7,288,027 B2	10/2007	Overton
6,659,861 B1	12/2003	Faris	7,341,517 B2	3/2008	Asher et al.
6,659,872 B1	12/2003	Kaufman et al.	7,343,617 B1	3/2008	Kartcher et al.
6,690,661 B1	2/2004	Agarwal et al.	7,347,781 B2	3/2008	Schultz
6,697,869 B1	2/2004	Mallart	7,351,149 B1	4/2008	Simon et al.
6,718,350 B1	4/2004	Karbowski	7,367,042 B1	4/2008	Dakss et al.
6,752,396 B2	6/2004	Smith	7,379,705 B1	5/2008	Rados et al.
6,758,754 B1	7/2004	Lavanchy et al.	7,389,144 B1	6/2008	Osorio
6,758,755 B2	7/2004	Kelly et al.	7,430,718 B2	9/2008	Garipey-Viles
6,760,595 B2	7/2004	Insellberg	7,452,273 B2	11/2008	Amaitis et al.
6,763,377 B1	7/2004	Balknap et al.	7,460,037 B2	12/2008	Cattone et al.
6,766,524 B1	7/2004	Matheny et al.	7,461,067 B2	12/2008	Dewing et al.
6,774,926 B1	8/2004	Ellis et al.	7,502,610 B2	3/2009	Maher
6,785,561 B1	8/2004	Kim	7,510,474 B2	3/2009	Carter, Sr.
6,801,380 B1	10/2004	Saturdja	7,517,282 B1	4/2009	Pryor
6,806,889 B1	10/2004	Malaure et al.	7,534,169 B2	5/2009	Amaitis et al.
6,807,675 B1	10/2004	Millard et al.	7,543,052 B1	6/2009	Cesa Klein
6,811,482 B2	11/2004	Letovsky	7,562,134 B1	7/2009	Fingerhut et al.
6,811,487 B2	11/2004	Sengoku	7,602,808 B2	10/2009	Ullmann
6,816,628 B1	11/2004	Sarachik et al.	7,610,330 B1	10/2009	Quinn
6,817,947 B2	11/2004	Tanskanen	7,614,944 B1	11/2009	Hughes et al.
6,824,469 B2	11/2004	Allibhoy et al.	7,630,986 B1	12/2009	Herz et al.
6,837,789 B2	1/2005	Garahi et al.	7,693,781 B2	4/2010	Asher et al.
6,837,791 B1	1/2005	McNutt et al.	7,699,707 B2	4/2010	Bahou
6,840,861 B2	1/2005	Jordan et al.	7,702,723 B2	4/2010	Dyl
6,845,389 B1	1/2005	Sen	7,711,628 B2	5/2010	Davie et al.
6,846,239 B2	1/2005	Washio	7,729,286 B2	6/2010	Mishra
6,857,122 B1	2/2005	Takeda et al.	7,753,772 B1	7/2010	Walker
6,863,610 B2	3/2005	Vancraeynest	7,753,789 B2	7/2010	Walker et al.
6,870,720 B2	3/2005	Iwata et al.	7,780,528 B2	8/2010	Hirayama
6,871,226 B1	3/2005	Ensley et al.	7,828,661 B1	11/2010	Fish
6,873,610 B1	3/2005	Noever	7,835,961 B2	11/2010	Davie et al.
6,884,166 B2	4/2005	Leen et al.	7,860,993 B2	12/2010	Chintala
6,884,172 B1	4/2005	Lloyd et al.	7,886,003 B2	2/2011	Newman
6,887,159 B2	5/2005	Leen et al.	7,907,211 B2	3/2011	Oostveen et al.
6,888,929 B1	5/2005	Saylor	7,907,598 B2	3/2011	Anisimov
6,893,347 B1	5/2005	Zilliacus et al.	7,909,332 B2	3/2011	Root
6,898,762 B2	5/2005	Ellis et al.	7,925,756 B1	4/2011	Riddle
6,899,628 B2	5/2005	Leen et al.	7,926,810 B2	4/2011	Fisher et al.
6,903,681 B2	6/2005	Faris	7,937,318 B2	5/2011	Davie et al.
6,908,389 B1	6/2005	Puskala	7,941,482 B2	5/2011	Bates
6,942,574 B1	9/2005	LeMay et al.	7,941,804 B1	5/2011	Herington
6,944,228 B1	9/2005	Dakss et al.	7,976,389 B2	7/2011	Cannon et al.
6,960,088 B1	11/2005	Long	8,002,618 B1	8/2011	Lockton
6,978,053 B1	12/2005	Sarachik et al.	8,006,314 B2	8/2011	Wold
7,001,279 B1	2/2006	Barber et al.	8,025,565 B2	9/2011	Leen et al.
7,029,394 B2	4/2006	Leen et al.	8,028,315 B1	9/2011	Barber
7,035,626 B1	4/2006	Luciano, Jr.	8,082,150 B2	12/2011	Wold
			8,086,445 B2	12/2011	Wold et al.
			8,086,510 B2	12/2011	Amaitis et al.
			8,092,303 B2	1/2012	Amaitis et al.
			8,092,306 B2	1/2012	Root

US 11,678,020 B2

Page 4

(56)

References Cited

U.S. PATENT DOCUMENTS

8,105,141 B2	1/2012	Leen et al.	9,457,272 B2	10/2016	Lockton et al.
8,107,674 B2	1/2012	Davis et al.	9,498,724 B2	11/2016	Lockton et al.
8,109,827 B2	2/2012	Cahill et al.	9,501,904 B2	11/2016	Lockton
8,128,474 B2	3/2012	Amaitis et al.	9,504,922 B2	11/2016	Lockton et al.
8,147,313 B2	4/2012	Amaitis et al.	9,511,287 B2	12/2016	Lockton et al.
8,147,373 B2	4/2012	Amaitis et al.	9,526,991 B2	12/2016	Lockton et al.
8,149,530 B1	4/2012	Lockton et al.	9,536,396 B2	1/2017	Amaitis et al.
8,155,637 B2	4/2012	Fujisawa	9,556,991 B2	1/2017	Furuya
8,162,759 B2	4/2012	Yamaguchi	9,604,140 B2	3/2017	Lockton et al.
8,176,518 B1	5/2012	Junkin et al.	9,652,937 B2	5/2017	Lockton
8,186,682 B2	5/2012	Amaitis et al.	9,662,576 B2	5/2017	Lockton et al.
8,204,808 B2	6/2012	Amaitis et al.	9,662,577 B2	5/2017	Lockton et al.
8,219,617 B2	7/2012	Ashida	9,672,692 B2	6/2017	Lockton
8,240,669 B2	8/2012	Asher et al.	9,687,738 B2	6/2017	Lockton et al.
8,246,048 B2	8/2012	Asher et al.	9,687,739 B2	6/2017	Lockton et al.
8,267,403 B2	9/2012	Fisher et al.	9,707,482 B2	7/2017	Lockton et al.
8,342,924 B2	1/2013	Leen et al.	9,716,918 B1	7/2017	Lockton et al.
8,342,942 B2	1/2013	Amaitis et al.	9,724,603 B2	8/2017	Lockton et al.
8,353,763 B2	1/2013	Amaitis et al.	9,744,453 B2	8/2017	Lockton et al.
8,376,855 B2	2/2013	Lockton et al.	9,805,549 B2	10/2017	Asher et al.
8,396,001 B2	3/2013	Jung	9,821,233 B2	11/2017	Lockton et al.
8,397,257 B1	3/2013	Barber	9,878,243 B2	1/2018	Lockton et al.
8,465,021 B2	6/2013	Asher et al.	9,881,337 B2	1/2018	Jaycobs et al.
8,473,393 B2	6/2013	Davie et al.	9,901,820 B2	2/2018	Lockton et al.
8,474,819 B2	7/2013	Asher et al.	9,908,053 B2	3/2018	Lockton et al.
8,535,138 B2	9/2013	Amaitis et al.	9,919,210 B2	3/2018	Lockton
8,538,563 B1	9/2013	Barber	9,919,211 B2	3/2018	Lockton et al.
8,543,487 B2	9/2013	Asher et al.	9,919,221 B2	3/2018	Lockton et al.
8,555,313 B2	10/2013	Newnam	9,978,217 B2	5/2018	Lockton
8,556,691 B2	10/2013	Leen et al.	9,993,730 B2	6/2018	Lockton et al.
8,585,490 B2	11/2013	Amaitis et al.	9,999,834 B2	6/2018	Lockton et al.
8,622,798 B2	1/2014	Lockton et al.	10,052,557 B2	8/2018	Lockton et al.
8,632,392 B2	1/2014	Shore et al.	10,089,815 B2	10/2018	Asher et al.
8,634,943 B2	1/2014	Root	10,096,210 B2	10/2018	Amaitis et al.
8,638,517 B2	1/2014	Lockton et al.	10,137,369 B2	11/2018	Lockton et al.
8,641,511 B2	2/2014	Ginsberg et al.	10,150,031 B2	12/2018	Lockton et al.
8,659,848 B2	2/2014	Lockton et al.	10,165,339 B2	12/2018	Huske et al.
8,672,751 B2	3/2014	Leen et al.	10,186,116 B2	1/2019	Lockton
8,699,168 B2	4/2014	Lockton et al.	10,195,526 B2	2/2019	Lockton et al.
8,705,195 B2	4/2014	Lockton	10,226,698 B1	3/2019	Lockton et al.
8,708,789 B2	4/2014	Asher et al.	10,226,705 B2	3/2019	Lockton et al.
8,717,701 B2	5/2014	Lockton et al.	10,232,270 B2	3/2019	Lockton et al.
8,727,352 B2	5/2014	Amaitis et al.	10,248,290 B2	4/2019	Galfond
8,734,227 B2	5/2014	Leen et al.	10,279,253 B2	5/2019	Lockton
8,737,004 B2	5/2014	Lockton et al.	10,360,767 B2	7/2019	Russell et al.
8,738,694 B2	5/2014	Huske et al.	10,569,175 B2	2/2020	Kosai et al.
8,771,058 B2	7/2014	Alderucci et al.	10,653,955 B2	5/2020	Lockton
8,780,482 B2	7/2014	Lockton et al.	10,695,672 B2	6/2020	Lockton et al.
8,805,732 B2	8/2014	Davie et al.	10,709,987 B2	7/2020	Lockton et al.
8,813,112 B1	8/2014	Cibula et al.	10,721,543 B2	7/2020	Huske et al.
8,814,664 B2	8/2014	Amaitis et al.	10,981,070 B2	4/2021	Isgreen
8,817,408 B2	8/2014	Lockton et al.	2001/0004609 A1	6/2001	Walker et al.
8,837,072 B2	9/2014	Lockton et al.	2001/0005670 A1	6/2001	Lahtinen
8,849,225 B1	9/2014	Choti	2001/0013067 A1	8/2001	Koyanagi
8,849,255 B2	9/2014	Choti	2001/0013125 A1	8/2001	Kitsukawa et al.
8,858,313 B1	10/2014	Selfors	2001/0020298 A1	9/2001	Rector, Jr. et al.
8,870,639 B2	10/2014	Lockton et al.	2001/0032333 A1	10/2001	Flickinger
8,935,715 B2	1/2015	Cibula et al.	2001/0036272 A1	11/2001	Hirayama
9,056,251 B2	6/2015	Lockton	2001/0036853 A1	11/2001	Thomas
9,067,143 B2	6/2015	Lockton et al.	2001/0044339 A1	11/2001	Cordero
9,069,651 B2	6/2015	Barber	2001/0054019 A1	12/2001	de Fabrega
9,076,303 B1	7/2015	Park	2002/0010789 A1	1/2002	Lord
9,098,883 B2	8/2015	Asher et al.	2002/0018477 A1	2/2002	Katz
9,111,417 B2	8/2015	Leen et al.	2002/0026321 A1	2/2002	Faris
9,205,339 B2	12/2015	Cibula et al.	2002/0029381 A1	3/2002	Inselberg
9,233,293 B2	1/2016	Lockton	2002/0035609 A1	3/2002	Lessard
9,258,601 B2	2/2016	Lockton et al.	2002/0037766 A1	3/2002	Muniz
9,270,789 B2	2/2016	Huske et al.	2002/0069265 A1	3/2002	Bountour
9,289,692 B2	3/2016	Barber	2002/0042293 A1	4/2002	Ubale et al.
9,306,952 B2	4/2016	Burman et al.	2002/0046099 A1	4/2002	Frengut et al.
9,314,686 B2	4/2016	Lockton	2002/0054088 A1	5/2002	Tanskanen et al.
9,314,701 B2	4/2016	Lockton et al.	2002/0055385 A1	5/2002	Otsu
9,355,518 B2	5/2016	Amaitis et al.	2002/0056089 A1	5/2002	Houston
9,406,189 B2	8/2016	Scott et al.	2002/0059094 A1	5/2002	Hosea et al.
9,430,901 B2	8/2016	Amaitis et al.	2002/0059623 A1	5/2002	Rodriguez et al.
			2002/0069076 A1	6/2002	Faris
			2002/0076084 A1	6/2002	Tian
			2002/0078176 A1	6/2002	Nomura et al.
			2002/0083461 A1	6/2002	Hutcheson

US 11,678,020 B2

Page 5

(56)

References Cited

U.S. PATENT DOCUMENTS

2002/0091833	A1	7/2002	Grimm	2004/0088729	A1	5/2004	Petrovic et al.
2002/0094869	A1	7/2002	Harkham	2004/0093302	A1	5/2004	Baker et al.
2002/0095333	A1	7/2002	Jokinen et al.	2004/0152454	A1	5/2004	Kauppinen
2002/0097983	A1	7/2002	Wallace et al.	2004/0107138	A1	6/2004	Maggio
2002/0099709	A1	7/2002	Wallace	2004/0117831	A1	6/2004	Ellis et al.
2002/0100063	A1	7/2002	Herigstad et al.	2004/0117839	A1	6/2004	Watson et al.
2002/0103696	A1	8/2002	Huang et al.	2004/0128319	A1	7/2004	Davis et al.
2002/0105535	A1	8/2002	Wallace et al.	2004/0139158	A1	7/2004	Datta
2002/0107073	A1	8/2002	Binney	2004/0139482	A1	7/2004	Hale
2002/0108112	A1	8/2002	Wallace et al.	2004/0148638	A1	7/2004	Weisman et al.
2002/0108125	A1	8/2002	Joao	2004/0152517	A1	8/2004	Haedisty
2002/0108127	A1	8/2002	Lew et al.	2004/0152519	A1	8/2004	Wang
2002/0112249	A1	8/2002	Hendricks et al.	2004/0158855	A1	8/2004	Gu et al.
2002/0115488	A1	8/2002	Berry et al.	2004/0162124	A1	8/2004	Barton
2002/0119821	A1	8/2002	Sen	2004/0166873	A1	8/2004	Simic
2002/0120930	A1	8/2002	Yona	2004/0176162	A1	9/2004	Rothschild
2002/0124247	A1	9/2002	Houghton	2004/0178923	A1	9/2004	Kuang
2002/0132614	A1	9/2002	Vanlujit et al.	2004/0183824	A1	9/2004	Benson
2002/0133817	A1	9/2002	Markel	2004/0185881	A1	9/2004	Lee
2002/0133827	A1	9/2002	Newman et al.	2004/0190779	A1	9/2004	Sarachik et al.
2002/0142843	A1	10/2002	Roelofs	2004/0198495	A1	10/2004	Cisneros et al.
2002/0144273	A1	10/2002	Reto	2004/0201626	A1	10/2004	Lavoie
2002/0147049	A1	10/2002	Carter, Sr.	2004/0203667	A1	10/2004	Shroder
2002/0157002	A1	10/2002	Messerges et al.	2004/0203898	A1	10/2004	Bodin et al.
2002/0157005	A1	10/2002	Bunk	2004/0210507	A1	10/2004	Asher et al.
2002/0159576	A1	10/2002	Adams	2004/0215756	A1	10/2004	VanAntwerp
2002/0162031	A1	10/2002	Levin et al.	2004/0216161	A1	10/2004	Barone, Jr. et al.
2002/0162117	A1	10/2002	Pearson	2004/0216171	A1	10/2004	Barone, Jr. et al.
2002/0165020	A1	11/2002	Koyama	2004/0224750	A1	11/2004	Ai-Ziyoud
2002/0165025	A1	11/2002	Kawahara	2004/0242321	A1	12/2004	Overton
2002/0177483	A1	11/2002	Cannon	2004/0266513	A1	12/2004	Odom
2002/0184624	A1	12/2002	Spencer	2005/0005303	A1	1/2005	Barone et al.
2002/0187825	A1	12/2002	Tracy	2005/0021942	A1	1/2005	Diehl et al.
2002/0198050	A1	12/2002	Patchen	2005/0026699	A1	2/2005	Kinzer et al.
2003/0002638	A1	1/2003	Kaars	2005/0028208	A1	2/2005	Ellis
2003/0003997	A1	1/2003	Vuong et al.	2005/0043094	A1	2/2005	Nguyen et al.
2003/0013528	A1	1/2003	Allibhoy et al.	2005/0060219	A1	3/2005	Ditering et al.
2003/0023547	A1	1/2003	France	2005/0076371	A1	4/2005	Nakamura
2003/0040363	A1	2/2003	Sandberg	2005/0077997	A1	4/2005	Landram
2003/0054885	A1	3/2003	Pinto et al.	2005/0097599	A1	5/2005	Potnick et al.
2003/0060247	A1	3/2003	Goldberg et al.	2005/0101309	A1	5/2005	Croome
2003/0066089	A1	4/2003	Anderson	2005/0113164	A1	5/2005	Buecheler et al.
2003/0069828	A1	4/2003	Blazey et al.	2005/0003878	A1	6/2005	Updike
2003/0070174	A1	4/2003	Solomon	2005/0131984	A1	6/2005	Hofmann et al.
2003/0078924	A1	4/2003	Liechty et al.	2005/0138668	A1	6/2005	Gray et al.
2003/0086691	A1	5/2003	Yu	2005/0144102	A1	6/2005	Johnson
2003/0087652	A1	5/2003	Simon et al.	2005/0155083	A1	7/2005	Oh
2003/0088648	A1	5/2003	Bellaton	2005/0177861	A1	8/2005	Ma et al.
2003/0114224	A1	6/2003	Anttila et al.	2005/0210526	A1	9/2005	Levy et al.
2003/0115152	A1	6/2003	Flaherty	2005/0216838	A1	9/2005	Graham
2003/0125109	A1	7/2003	Green	2005/0235043	A1	10/2005	Teodosiu et al.
2003/0134678	A1	7/2003	Tanaka	2005/0239551	A1	10/2005	Griswold
2003/0144017	A1	7/2003	Inselberg	2005/0255901	A1	11/2005	Kreutzer
2003/0154242	A1	8/2003	Hayes et al.	2005/0256895	A1	11/2005	Dussault
2003/0165241	A1	9/2003	Fransdonk	2005/0266869	A1	12/2005	Jung
2003/0177167	A1	9/2003	Laage et al.	2005/0267969	A1	12/2005	Poikselka et al.
2003/0177504	A1	9/2003	Paulo et al.	2005/0273804	A1	12/2005	Preisman
2003/0189668	A1	10/2003	Newman et al.	2005/0283800	A1	12/2005	Ellis et al.
2003/0195023	A1	10/2003	Di Cesare	2005/0288080	A1	12/2005	Lockton et al.
2003/0195807	A1	10/2003	Maggio	2005/0288101	A1	12/2005	Lockton et al.
2003/0208579	A1	11/2003	Brady et al.	2005/0288812	A1	12/2005	Cheng
2003/0211856	A1	11/2003	Zilliaccus	2006/0020700	A1	1/2006	Qiu
2003/0212691	A1	11/2003	Kuntala et al.	2006/0025070	A1	2/2006	Kim et al.
2003/0216185	A1	11/2003	Varley	2006/0046810	A1	3/2006	Tabata
2003/0216857	A1	11/2003	Feldman et al.	2006/0047772	A1	3/2006	Crutcher
2003/0228866	A1	12/2003	Pezeshki	2006/0053390	A1	3/2006	Garipey-Viles
2003/0233425	A1	12/2003	Lyons et al.	2006/0058103	A1	3/2006	Danieli
2004/0005919	A1	1/2004	Walker et al.	2006/0059161	A1	3/2006	Millett et al.
2004/0014524	A1	1/2004	Pearlman	2006/0063590	A1	3/2006	Abassi et al.
2004/0015442	A1	1/2004	Hmlinen	2006/0082068	A1	4/2006	Patchen
2004/0022366	A1	2/2004	Ferguson et al.	2006/0087585	A1	4/2006	Seo
2004/0025190	A1	2/2004	McCalla	2006/0089199	A1	4/2006	Jordan et al.
2004/0056897	A1	3/2004	Ueda	2006/0094409	A1	5/2006	Inselberg
2004/0060063	A1	3/2004	Russ et al.	2006/0101492	A1	5/2006	Lowcock
2004/0073915	A1	4/2004	Dureau	2006/0111168	A1	5/2006	Nguyen
				2006/0135253	A1	6/2006	George et al.
				2006/0148569	A1	7/2006	Beck
				2006/0156371	A1	7/2006	Maetz et al.
				2006/0160597	A1	7/2006	Wright

US 11,678,020 B2

Page 6

(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0174307	A1	8/2006	Hwang et al.	2011/0016224	A1	1/2011	Riley
2006/0183547	A1	8/2006	McMonigle	2011/0053681	A1	3/2011	Goldman
2006/0183548	A1	8/2006	Morris et al.	2011/0065490	A1	3/2011	Lutnick
2006/0190654	A1	8/2006	Joy	2011/0081958	A1	4/2011	Herman
2006/0205483	A1	9/2006	Meyer et al.	2011/0116461	A1	5/2011	Holt
2006/0205509	A1	9/2006	Hirota	2011/0130197	A1	6/2011	Bythar et al.
2006/0205510	A1	9/2006	Lauper	2011/0227287	A1	9/2011	Reabe
2006/0217198	A1	9/2006	Johnson	2011/0269548	A1	11/2011	Barclay et al.
2006/0236352	A1	10/2006	Scott, III	2011/0306428	A1	12/2011	Lockton et al.
2006/0248553	A1	11/2006	Mikkelsen et al.	2012/0058808	A1	3/2012	Lockton
2006/0248564	A1	11/2006	Zinevitch	2012/0115585	A1	5/2012	Goldman
2006/0256865	A1	11/2006	Westerman	2012/0157178	A1	6/2012	Lockton
2006/0256868	A1	11/2006	Westerman	2012/0264496	A1	10/2012	Behrman et al.
2006/0269120	A1	11/2006	Nehmadi et al.	2012/0282995	A1	11/2012	Allen et al.
2006/0285586	A1	12/2006	Westerman	2012/0295686	A1	11/2012	Lockton
2007/0004516	A1	1/2007	Jordan et al.	2013/0005453	A1	1/2013	Nguyen et al.
2007/0013547	A1	1/2007	Boaz	2013/0072271	A1	3/2013	Lockton et al.
2007/0019826	A1	1/2007	Horbach et al.	2013/0079081	A1	3/2013	Lockton et al.
2007/0028272	A1	2/2007	Lockton	2013/0079092	A1	3/2013	Lockton et al.
2007/0037623	A1	2/2007	Romik	2013/0079093	A1	3/2013	Lockton et al.
2007/0054695	A1	3/2007	Huske et al.	2013/0079135	A1	3/2013	Lockton et al.
2007/0078009	A1	4/2007	Lockton et al.	2013/0079150	A1	3/2013	Lockton et al.
2007/0083920	A1	4/2007	Mizoguchi et al.	2013/0079151	A1	3/2013	Lockton et al.
2007/0086465	A1	4/2007	Paila et al.	2013/0196774	A1	8/2013	Lockton et al.
2007/0087832	A1	4/2007	Abbott	2013/0225285	A1	8/2013	Lockton
2007/0093296	A1	4/2007	Asher	2013/0225299	A1	8/2013	Lockton
2007/0106721	A1	5/2007	Schloter	2014/0031134	A1	1/2014	Lockton et al.
2007/0107010	A1	5/2007	Jolna et al.	2014/0100011	A1	4/2014	Gingher
2007/0129144	A1	6/2007	Katz	2014/0106832	A1	4/2014	Lockton et al.
2007/0147870	A1	7/2007	Nagashima et al.	2014/0128139	A1	5/2014	Shuster et al.
2007/0162328	A1	7/2007	Reich	2014/0155130	A1	6/2014	Lockton et al.
2007/0183744	A1	8/2007	Koizumi	2014/0155134	A1	6/2014	Lockton
2007/0197247	A1	8/2007	Inselberg	2014/0206446	A1	7/2014	Lockton et al.
2007/0210908	A1	9/2007	Putterman et al.	2014/0237025	A1	8/2014	Huske et al.
2007/0219856	A1	9/2007	Ahmad-Taylor	2014/0248952	A1	9/2014	Cibula et al.
2007/0222652	A1	9/2007	Cattone et al.	2014/0256432	A1	9/2014	Lockton et al.
2007/0226062	A1	9/2007	Hughes et al.	2014/0279439	A1	9/2014	Brown
2007/0238525	A1	10/2007	Suomela	2014/0287832	A1	9/2014	Lockton et al.
2007/0243936	A1	10/2007	Binstock et al.	2014/0309001	A1	10/2014	Root
2007/0244570	A1	10/2007	Speiser et al.	2014/0335961	A1	11/2014	Lockton et al.
2007/0244585	A1	10/2007	Speiser et al.	2014/0335962	A1	11/2014	Lockton et al.
2007/0244749	A1	10/2007	Speiser et al.	2014/0378212	A1	12/2014	Sims
2007/0265089	A1	11/2007	Robarts	2015/0011310	A1	1/2015	Lockton et al.
2007/0294410	A1	12/2007	Pandya	2015/0024814	A1	1/2015	Root
2008/0005037	A1	1/2008	Hammad	2015/0067732	A1	3/2015	Howe et al.
2008/0013927	A1	1/2008	Kelly et al.	2015/0148130	A1	5/2015	Cibula et al.
2008/0051201	A1	2/2008	Lore	2015/0238839	A1	8/2015	Lockton
2008/0066129	A1	3/2008	Katcher et al.	2015/0238873	A1	8/2015	Amone et al.
2008/0076497	A1	3/2008	Kiskis et al.	2015/0258452	A1	9/2015	Lockton et al.
2008/0104630	A1	5/2008	Bruce	2015/0356831	A1	12/2015	Osibodu
2008/0146337	A1	6/2008	Halonen	2016/0023116	A1	1/2016	Wire
2008/0169605	A1	7/2008	Shuster et al.	2016/0045824	A1	2/2016	Lockton et al.
2008/0222672	A1	9/2008	Piesing	2016/0049049	A1	2/2016	Lockton
2008/0240681	A1	10/2008	Fukushima	2016/0054872	A1	2/2016	Cibula et al.
2008/0248865	A1	10/2008	Tedesco	2016/0082357	A1	3/2016	Lockton
2008/0270288	A1	10/2008	Butterly et al.	2016/0121208	A1	5/2016	Lockton et al.
2008/0288600	A1	11/2008	Clark	2016/0134947	A1	5/2016	Huske et al.
2009/0011781	A1	1/2009	Merrill et al.	2016/0217653	A1	7/2016	Meyer
2009/0094632	A1	4/2009	Newman et al.	2016/0271501	A1	9/2016	Balsbaugh
2009/0103892	A1	4/2009	Hirayama	2016/0361647	A1	12/2016	Lockton et al.
2009/0186676	A1	7/2009	Amaitis et al.	2016/0375362	A1	12/2016	Lockton et al.
2009/0163271	A1	9/2009	George et al.	2017/0036110	A1	2/2017	Lockton et al.
2009/0228351	A1	9/2009	Rijnsbrij	2017/0036117	A1	2/2017	Lockton et al.
2009/0234674	A1	9/2009	Wurster	2017/0043259	A1	2/2017	Lockton et al.
2009/0264188	A1	10/2009	Soukup	2017/0053498	A1	2/2017	Lockton
2009/0271512	A1	10/2009	Jorgensen	2017/0065891	A1	3/2017	Lockton et al.
2009/0325716	A1	12/2009	Harari	2017/0098348	A1	4/2017	Odom
2010/0099421	A1	4/2010	Patel et al.	2017/0103615	A1	4/2017	Theodosopoulos
2010/0099471	A1	4/2010	Feeney et al.	2017/0128840	A1	5/2017	Croci
2010/0107194	A1	4/2010	McKissick et al.	2017/0221314	A1	8/2017	Lockton
2010/0120503	A1	5/2010	Hoffman et al.	2017/0225071	A1	8/2017	Lockton et al.
2010/0137057	A1	6/2010	Fleming	2017/0225072	A1	8/2017	Lockton et al.
2010/0203936	A1	8/2010	Levy	2017/0232340	A1	8/2017	Lockton
2010/0279764	A1	11/2010	Allen et al.	2017/0243438	A1	8/2017	Merati
2010/0296511	A1	11/2010	Prodan	2017/0249801	A1	8/2017	Malek
				2017/0252649	A1	9/2017	Lockton et al.
				2017/0259173	A1	9/2017	Lockton et al.
				2017/0264961	A1	9/2017	Lockton
				2017/0282067	A1	10/2017	Lockton et al.

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(56)

References Cited

U.S. PATENT DOCUMENTS

2017/0296916	A1	10/2017	Lockton et al.
2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102 A3	6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999
JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01/039506 A2	5/2001
WO	01/65743 A1	9/2001
WO	02/03698 A1	10/2002
WO	2005064506 A1	7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007
WO	2007016575	2/2007
WO	2007041667	4/2007
WO	2008027811 A2	3/2008
WO	2008115858 A1	9/2008

OTHER PUBLICATIONS

Gambling Commission, "Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcommission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.

Sipko et al., "Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games, Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , <http://www.winviewgames.com/press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.

International Search Report and The Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasysport-Wikipedia.pdf, [https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969\(Year:2015\)](https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015)).

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

Ark 4.0 Standard Edition, Technical Overview www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games by Tristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6.html.

"On the Performance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <<http://www.merriam-webster.com/dictionary/agme.pg.1>>.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

<http://help.yahoo.com/help/us/tourn/tourn-03.html>.

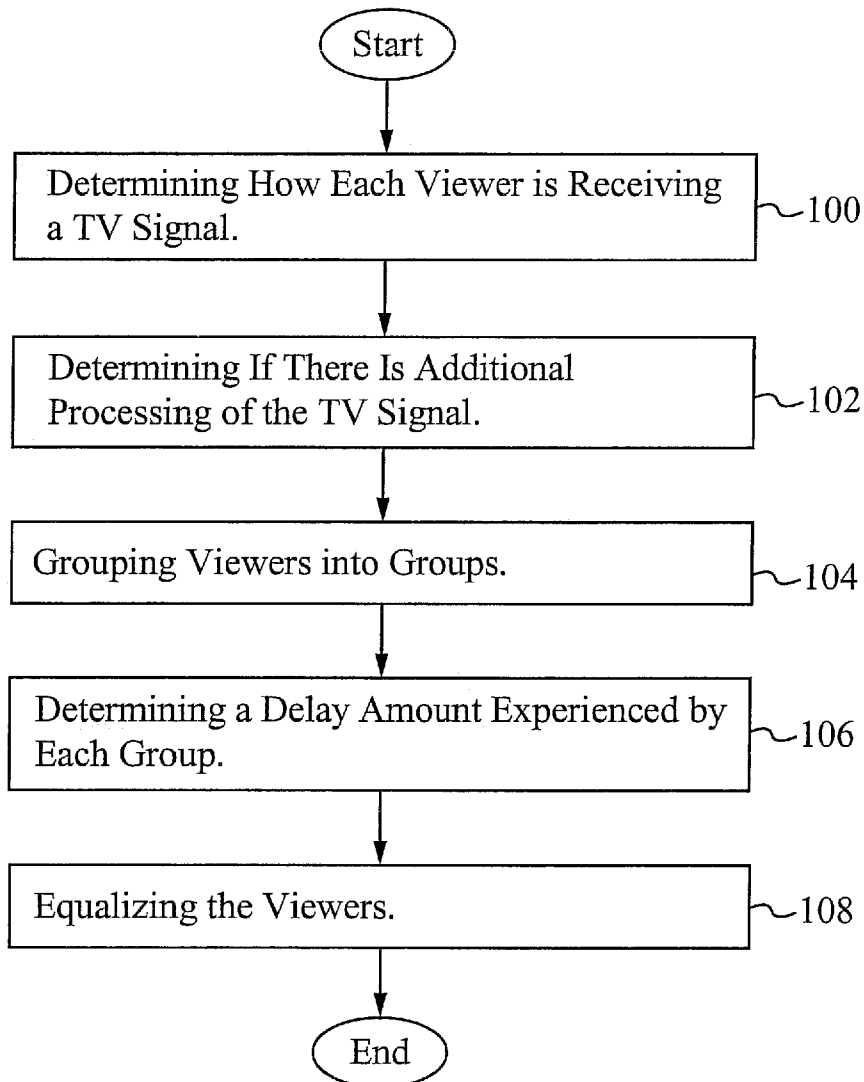
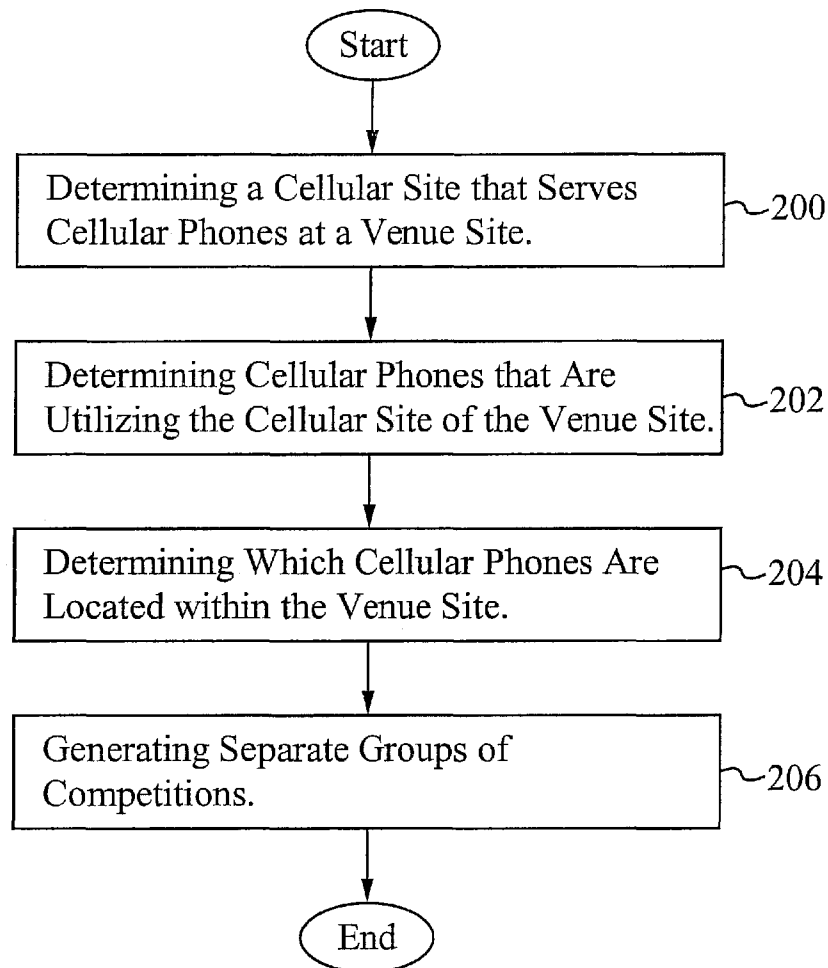


Fig. 1

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US 11,678,020 B2**Fig. 2**

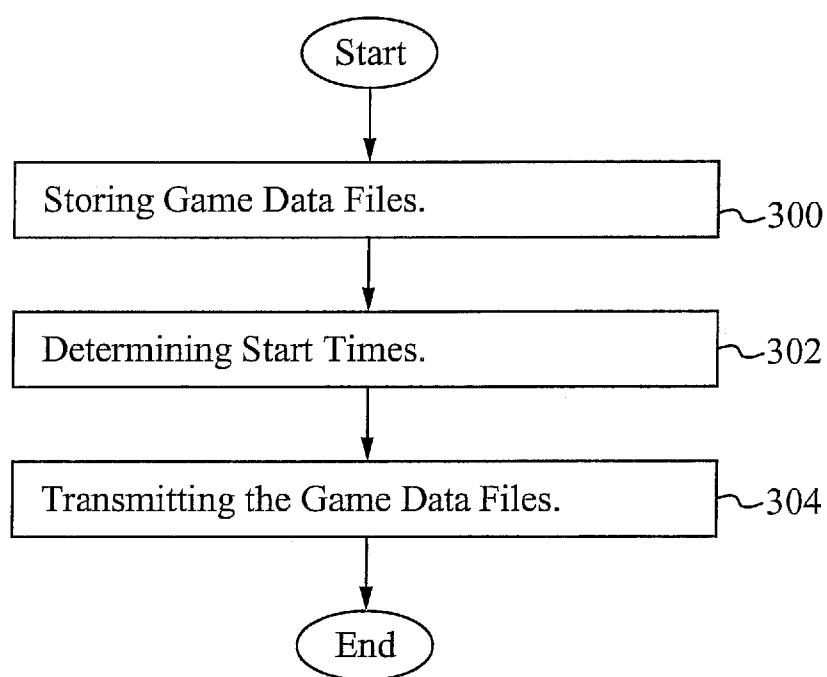


Fig. 3

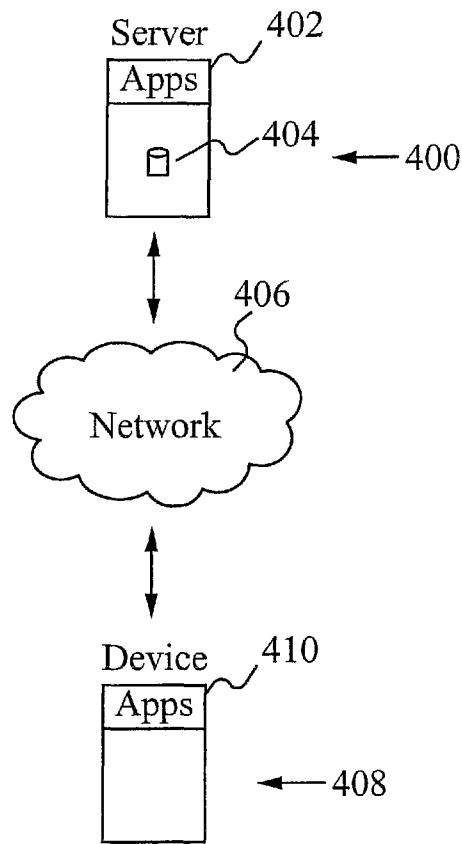


Fig. 4

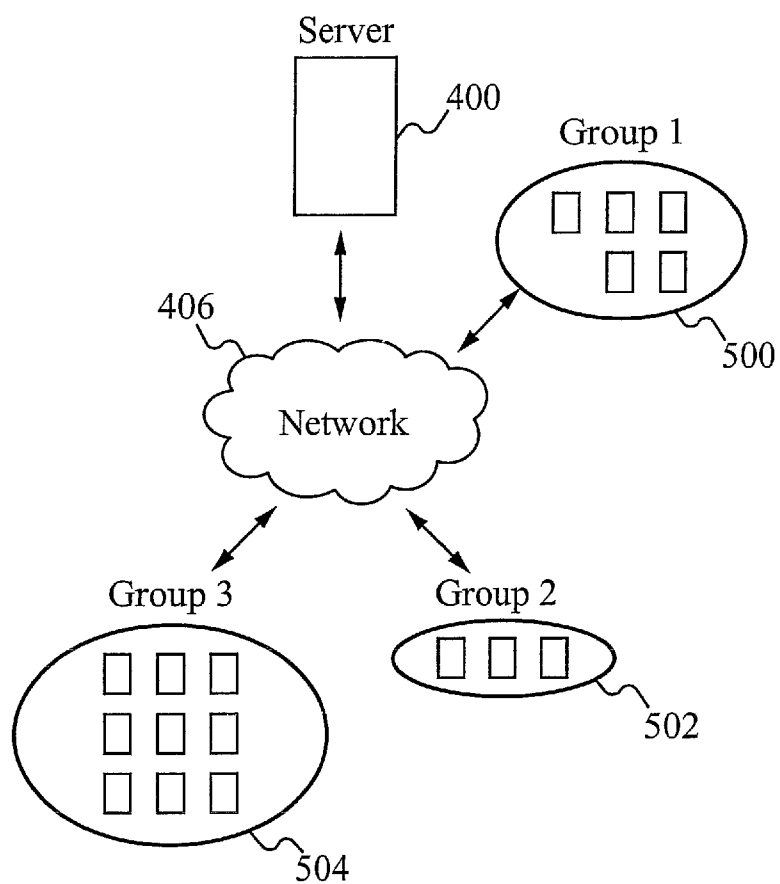


Fig. 5

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**METHODOLOGY FOR EQUALIZING
SYSTEMIC LATENCIES IN TELEVISION
RECEPTION IN CONNECTION WITH
GAMES OF SKILL PLAYED IN
CONNECTION WITH LIVE TELEVISION
PROGRAMMING**

RELATED APPLICATION(S)

This Patent Application is a continuation application of U.S. patent application Ser. No. 16/749,864, filed Jan. 22, 2020, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation of U.S. patent application Ser. No. 16/177,118, filed Oct. 31, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation application of U.S. patent application Ser. No. 15/900,438, filed Feb. 20, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation of U.S. patent application Ser. No. 15/648,101, filed Jul. 12, 2017, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation application of U.S. patent application Ser. No. 15/263,186, filed Sep. 12, 2016, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional application of U.S. patent application Ser. No. 14/172,571, filed Feb. 4, 2014, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 13/681,172, filed Nov. 19, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, (now U.S. Pat. No. 8,149,530), titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A

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NECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish

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network may experience a 3 second delay compared to an individual in California using a cable network. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

In one aspect, a method of equalizing effects of latency differences in a game of skill comprises grouping participants into a set of cohorts viewing a telecast delivered by identical transmission and reception systems, determining an amount of delay for each cohort in the set of cohorts and substantially equalizing the set of cohorts through adjustment of the amount of delay. The method further comprises determining how each participant receives a television signal. How each participant receives a television signal is selected from the group consisting of an over the air broadcast, a cable system and a satellite system. The participants are grouped based on how the participants receive a television signal. The method further comprises determining if there is additional processing of a television signal in a reception location. The additional processing occurs within a participant's location selected from the group consisting of a public place, a home, an office and a bar. Since each cable system may impose different delay at their head-ends, the specific cable provider is identified. Determining the amount of delay comprises one or more of requiring the participants to answer questions related to their television system service, requiring the participants to mark on a game playing client device, a precise time that a predetermined audio or visual event is viewed on a television program, utilizing a GPS function in a cellular phone to determine a physical location of each of the participants, utilizing an employee of a game producer who is a member of each cohort in the set of cohorts to determine the amount of delay, inserting an artifact in the telecast in which the participants respond to, and establishing the amount of delay through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal, linked to a game server, to provide information related to a precise arrival of an underlying television picture. An average is taken when requiring participants to mark the precise time the predetermined audio or visual event is viewed on the television program. Equalizing the set of cohorts comprises at least one of time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise time of reception of the telecast by the group.

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In another aspect, a method of preventing a first set of participants at a live event from having an advantage over a second set of participants watching the live event on television comprises determining a cellular site that serves a set of cellular phones at a venue site, determining the set of cellular phones that are utilizing the cellular site of the venue site, determining a subset of cellular phones within the set of cellular phones that are located within the venue site and generating separate groups of competitions based on the subset of cellular phones within the set of cellular phones that are located within the venue site. A first group within the separate groups of competitions includes only the first set of participants and a second group within the separate groups of competitions includes only the second set of participants. An application on a server determines the cellular site, the set of cellular phones utilizing the cellular site and the subset of cellular phones located within the venue site. An application on each cellular phone within the subset of cellular phones determines if the cellular phone is located within the venue site.

In another aspect, a method of equalizing effects of latency issues with a taped television broadcast comprises storing a set of data files on a server, determining one or more start times and transmitting the set of files from the server to each mobile device at a transmission time corresponding to an appropriate start time for the mobile device. An application starts using the set of files at the one or more start times. The set of data files are game data files. Determining the one or more start times includes at least one of utilizing an employee of a game provider based on visual observation of a telecast, utilizing at least one of an audio and video recognition system with online access to the broadcast for each separate market which provides real-time tracking of the broadcast to the server, adding at least one of an audio and video event in the television broadcast which is recognizable at a starting point, designating at least one of the audio and video event in the television broadcast which is recognizable as the starting point, utilizing an audio signal, inserted within the broadcast recognizable by an audio receiver of the mobile device, and using a vertical blanking interval.

In yet another aspect, a system for equalizing effects of latency issues for a game of skill comprises a mobile device and a server coupled to the mobile device wherein the server sends a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The mobile device is within a group of mobile devices. The server determines which group the mobile device is in. The server stores game control data and transmits the game control data to the mobile device. The game control data includes delay information for implementing the lockout signal. The server contains a location determination application for determining the location of the mobile device. The mobile device contains a location determination application for determining the location of the mobile device. Variances in delays in receiving the television signal determine delays in transmitting applicable data files within a television signal reception path.

In another aspect, a device for equalizing effects of latency issues for a game of skill comprises a storage device and a set of applications contained within the storage device for sending a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The set of applications determines which group mobile devices coupled to the device are in. The device stores game control

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data and transfers the game control data to mobile devices. The game control data includes delay information for implementing the lockout signal. The set of applications includes a location application for determining the location of mobile devices. The amount of delay accounts for delays within a television signal reception path.

A network of devices comprises a plurality of mobile devices and a server coupled to the mobile devices wherein the server groups the plurality of mobile devices into a set of cohorts and wherein the server sends a lockout signal at an appropriate time based on an amount of delay to prevent users from submitting a response after they see the outcome. Each cohort within the set of cohorts is based on a signal reception path. The signal reception path is selected from the group consisting of an over the air network, a cable network and a satellite network. The server stores game control data and transfers the game control data to each mobile device within the plurality of mobile devices. The game control data is specific for each cohort within the set of cohorts. The game control data includes delay information for equalizing the lockout signal. The amount of delay accounts for delays within a television signal reception path.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODS ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

The present invention addresses three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays of a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars.

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In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game is based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one

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who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the system addressed in the present invention is to ensure the competitors feel they are on equal footing.

The present invention solves the above described issue through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. The present invention relies on a variety of methodologies which are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where “lock out” signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as “cohorts.” For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable “head ends” or central broadcast points serving a “cohort.” This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts which are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

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In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider.

5 These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

10 In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers’ television sets.

15 In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

20 Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game “lock out” signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers’ cohort.

30 Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of “lock out” data relative to the event triggering the “lock out,” based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive “lock out” signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

45 Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the “lock out” signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step 100, it is determined how each viewer receives a television signal, where possibilities include an over the air broadcast, a particular cable system or a particular satellite system. In the step 102, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant’s house, office, bar or other location from an item such as a DVR. In the step 104, the viewers/participants are grouped into groups also

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referred to as cohorts. In the step 106, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step 108, the viewers/participants are equalized. The methods of equalization vary, but some examples include time stamping on the game "lock out" signals, imposing a time stamp on the entire data stream so that competitors receiving their television information is slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, Snap Smart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

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For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. The present invention is also able to involve a communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced through the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step 200, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step 202, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step 204, it is determined if the cellular phone is located within the venue site. The determination is made by comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step 204, separate groups are generated in the step 206. A group is generated for users that are located at the live venue, and

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a group is generated for those players that are watching live on television. Therefore, the live players who do not experience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of Fortune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local

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telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

This invention protects a system which first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped

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audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs. In the step 300, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step 302, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining start times are possible as well. In the step 304, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention. A server 400 contains applications 402 and a storage mechanism 404. The applications 402 include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server 400 is able to determine which cellular phones are logged into the server 400 and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism 404 is utilized for storing the applications 402 in addition to selections and results. The storage mechanism 404 preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server 400 is part of a network 406. A device 408 couples to the server 400 through the network 406. In some embodiments the network 406 includes the Internet. In some embodiments, the network 406 includes a cellular network. Also, in some embodiments, the network 406 includes both the Internet and a cellular network. The device 408 is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server 400 is possible. The device 408 stores a variety of applications 410. A game application is stored on the device 408. In some embodiments, software to identify the physical location of the device 408 is stored on the device 408. The device 408 also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device 408 receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server 400 and on the device 408, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention. A server 400 is coupled to many devices through a network 406. The devices are

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grouped into groups or cohorts as described above. For example, Group 1 of devices 500 includes a set of devices that receive a television signal through cable with a delay time of x. Group 2 of devices 502 includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices 504 includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

To utilize the present invention, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the present invention. The user simply plays as usual except that with the present invention, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, implementing the present invention is able to be automated or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the present invention is able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the

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attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the present invention ensures that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of providing a game of skill or chance or other entertainment including content related to an event, the method comprising:

- a. determining a location of a mobile device;
- b. providing the game of skill or chance or other entertainment during the event, based on the location of the mobile device;
- c. receiving input related to the game of skill or chance or other entertainment during the event; and
- d. triggering a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment, including utilizing a person in physical attendance at the event to determine when to trigger the lockout signal.

2. The method of claim 1 wherein determining the location of the mobile device includes determining whether the mobile device is within a gaming or sporting event venue.

3. The method of claim 1 wherein the content comprises information or entertainment content.

4. The method of claim 1 wherein input to the mobile device is by a cellular, WiFi, Bluetooth or another 2-way wireless transmission.

5. The method of claim 1 wherein the content comprises betting data from a real-time sports betting service.

6. The method of claim 1 wherein the content relates to a real-time sports prediction contest.

7. The method of claim 1 wherein the content relates to selections of a subset of participants in the event.

8. The method of claim 1 wherein the lockout signal is triggered immediately before users are able to see a relevant gameplay unfold.

9. The method of claim 1 wherein the lockout signal is triggered during an in-progress play, not during a stoppage,

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and prevents submitting a response before a critical element of the in-progress play unfolds.

10. The method of claim 1 wherein providing the game of skill or chance or other entertainment includes sending the content related to the event via a wireless network.

11. The method of claim 10 wherein the wireless network comprises the Internet and/or a cellular network, including cellular, WiFi, Bluetooth or another 2-way wireless transmission.

12. The method of claim 1 wherein the lockout signal suspends interaction for a limited amount of time.

13. The method of claim 1 wherein global positioning system information is utilized to determine the location of the mobile device.

14. The method of claim 1 wherein the lockout signal occurs during an in-progress play, not during a stoppage, and prevents submitting the response before a critical element of the in-progress play unfolds.

15. The method of claim 14 wherein the lockout signal suspends the ability to submit the response while betting odds information is updated to reflect changing event status.

16. The method of claim 1 wherein the lockout signal is initiated before a scoring chance in the game of skill or chance or other entertainment and additional user input is allowed after the scoring chance is resolved.

17. The method of claim 16 wherein the lockout signal prevents a response while betting odds information is updated to reflect changing event status.

18. A device for providing a game of skill or chance or other entertainment including content related to an event, the device comprising:

a. a memory for storing an application, the application configured for:

- i. determining a location of a mobile device;
- ii. providing the game of skill or chance or other entertainment during the event, based on the location of the mobile device;
- iii. receiving input related to the game of skill or chance or other entertainment during the event; and
- iv. triggering a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment, including utilizing a person in physical attendance at the event to determine when to trigger the lockout signal; and

b. a processor configured for processing the application.

19. The device of claim 18 wherein determining the location of the mobile device includes determining whether the mobile device is within a gaming or sporting event venue.

20. The device of claim 18 wherein input to the mobile device is by a cellular, WiFi, Bluetooth or another 2-way wireless transmission.

21. The device of claim 18 wherein the content comprises betting data from a real-time sports betting service.

22. The device of claim 18 wherein the content relates to a real-time sports prediction contest.

23. The device of claim 18 wherein the lockout signal is triggered immediately before users are able to see a relevant gameplay unfold.

24. The device of claim 18 wherein the lockout signal is triggered during an in-progress play, not during a stoppage, and prevents submitting a response before a critical element of the in-progress play unfolds.

25. The device of claim 18 wherein the lockout signal suspends interaction for a limited amount of time.

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26. The device of claim 18 wherein global positioning system information is utilized to determine the location of the mobile device.

27. The device of claim 18 wherein the lockout signal occurs during an in-progress play, not during a stoppage, and prevents submitting the response before a critical element of the in-progress play unfolds.

28. The device of claim 27 wherein the lockout signal suspends the ability to submit the response while betting odds information is updated to reflect changing event status.

29. The device of claim 18 wherein the lockout signal is initiated before a scoring chance in the game of skill or chance or other entertainment and additional user input is allowed after the scoring chance is resolved.

30. The device of claim 29 wherein the lockout signal prevents a response while betting odds information is updated to reflect changing event status.

31. A server device for providing a game of skill or chance or other entertainment including content related to an event, the device comprising:

- a. a memory for storing an application, the application configured for:
 - i. determining a location of a mobile device;
 - ii. providing the game of skill or chance or other entertainment during the event, based on the location of the mobile device; and
 - iii. receiving input related to the game of skill or chance or other entertainment during the event;
 - iv. triggering a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment, including utilizing a person in physical attendance at the event to determine when to trigger the lockout signal; and
- b. a processor configured for processing the application.

32. The server device of claim 31 wherein determining the location of the mobile device includes determining whether the mobile device is within a gaming or sporting event venue.

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33. The server device of claim 31 wherein input to the mobile device is by a cellular, WiFi, Bluetooth or another 2-way wireless transmission.

34. The server device of claim 31 wherein the content comprises betting data from a real-time sports betting service.

35. The server device of claim 31 wherein the content relates to a real-time sports prediction contest.

36. The server device of claim 31 wherein triggering the lockout signal occurs immediately before users are able to see a relevant gameplay unfold.

37. The server device of claim 31 wherein triggering the lockout signal occurs during an in-progress play, not during a stoppage, and prevents submitting a response before a critical element of the in-progress play unfolds.

38. The server device of claim 31 wherein the lockout signal suspends interaction for a limited amount of time.

39. The server device of claim 31 wherein global positioning system information is utilized to determine the location of the mobile device.

40. The server device of claim 31 wherein the lockout signal occurs during an in-progress play, not during a stoppage, and prevents submitting the response before a critical element of the in-progress play unfolds.

41. The server device of claim 40 wherein the lockout signal suspends the ability to submit the response while betting odds information is updated to reflect changing event status.

42. The server device of claim 31 wherein the lockout signal is initiated before a scoring chance in the game of skill or chance or other entertainment and additional user input is allowed after the scoring chance is resolved.

43. The server device of claim 42 wherein the lockout signal prevents a response while betting odds information is updated to reflect changing event status.

* * * * *

Exhibit 6

US011736771B2

(12) **United States Patent**
Lockton et al.

(10) **Patent No.:** **US 11,736,771 B2**
(45) **Date of Patent:** ***Aug. 22, 2023**

(54) **METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING**

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(Continued)

(58) **Field of Classification Search**

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(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

Fantasy sport-Wikipedia.pdf, https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969 (Year:2015).

(Continued)

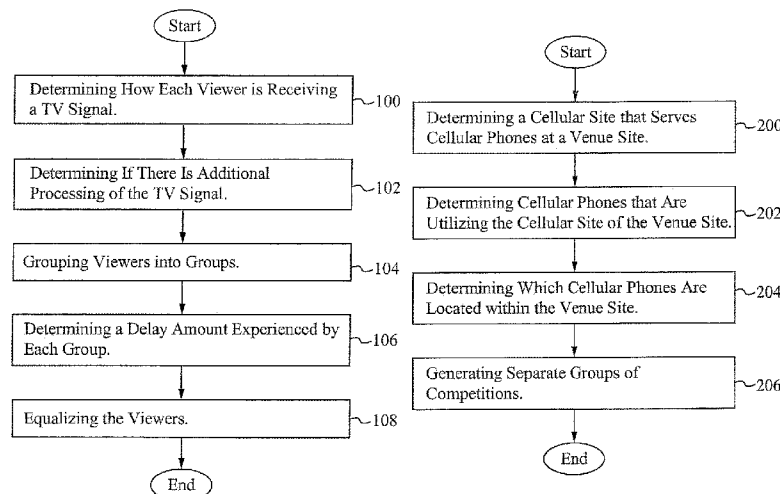
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(57) **ABSTRACT**

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

44 Claims, 5 Drawing Sheets



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Related U.S. Application Data

continuation of application No. 16/228,583, filed on Dec. 20, 2018, now Pat. No. 10,576,371, which is a continuation of application No. 15/963,970, filed on Apr. 26, 2018, now Pat. No. 10,195,526, which is a continuation of application No. 15/625,988, filed on Jun. 16, 2017, now Pat. No. 9,993,730, which is a continuation of application No. 14/922,937, filed on Oct. 26, 2015, now Pat. No. 9,861,125, which is a continuation of application No. 14/140,198, filed on Dec. 24, 2013, now Pat. No. 9,258,601, which is a continuation of application No. 13/681,242, filed on Nov. 19, 2012, now Pat. No. 8,638,517, which is a division of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530.

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USPC 360/65, 51; 381/103; 370/260; 463/40–42

See application file for complete search history.

(56)

References Cited

U.S. PATENT DOCUMENTS

4,141,548 A 2/1979 Everton
4,270,755 A 6/1981 Willhide et al.
4,386,377 A 5/1983 Hunter, Jr.
4,496,148 A 1/1985 Morstain et al.
4,521,803 A 6/1985 Glittinger
4,592,546 A 6/1986 Fascenda et al.
4,816,904 A 3/1989 McKenna et al.
4,918,603 A 4/1990 Hughes et al.
4,930,010 A 5/1990 MacDonald
5,013,038 A 5/1991 Luvenberg
5,018,736 A 5/1991 Pearson et al.
5,035,422 A 7/1991 Berman
5,073,931 A 12/1991 Audebert et al.
5,083,271 A 1/1992 Thatcher et al.
5,083,800 A 1/1992 Lockton
5,119,295 A 6/1992 Kapur
5,120,076 A 6/1992 Luxenberg et al.
5,213,337 A 5/1993 Sherman
5,227,874 A 7/1993 Von Kohom
5,256,863 A 10/1993 Ferguson
5,263,723 A 11/1993 Pearson et al.
5,283,734 A 2/1994 Von Kohom
5,327,485 A 7/1994 Leaden
5,343,236 A 8/1994 Koppe et al.
5,343,239 A 8/1994 Lappington et al.
5,417,424 A 5/1995 Snowden
5,462,275 A 10/1995 Lowe et al.
5,479,492 A 12/1995 Hofstee et al.
5,488,659 A 1/1996 Millani
5,519,433 A 5/1996 Lappington
5,530,483 A 6/1996 Cooper
5,553,120 A 9/1996 Katz
5,566,291 A 10/1996 Boulton et al.
5,585,975 A 12/1996 Bliss
5,586,257 A 12/1996 Perlman
5,589,765 A 12/1996 Ohmart et al.
5,594,938 A 1/1997 Engel
5,618,232 A 4/1997 Martin
5,628,684 A 5/1997 Jean-Etienne
5,636,920 A 6/1997 Shur et al.
5,638,113 A 6/1997 Lappington
5,643,088 A 7/1997 Vaughn et al.
5,663,757 A 9/1997 Morales
5,759,101 A 6/1998 Won Kohom
5,761,606 A 6/1998 Wolzien
5,762,552 A 6/1998 Voung et al.
5,764,275 A 6/1998 Lappington et al.
5,794,210 A 8/1998 Goldhaber et al.
5,805,230 A 9/1998 Staron
5,813,913 A 9/1998 Berner et al.
5,818,438 A 10/1998 Howe et al.
5,828,843 A 10/1998 Grimm
5,838,774 A 11/1998 Weiser, Jr.
5,838,909 A 11/1998 Roy
5,846,132 A 12/1998 Junkin
5,848,397 A 12/1998 Marsh et al.
5,860,862 A 1/1999 Junkin
5,894,556 A 4/1999 Grimm
5,916,024 A 6/1999 Von Kohom
5,870,683 A 9/1999 Wells et al.
5,970,143 A 10/1999 Schneier et al.
5,971,854 A 10/1999 Pearson et al.

US 11,736,771 B2

Page 3

(56)

References Cited

U.S. PATENT DOCUMENTS

5,987,440 A	11/1999	O'Neil et al.	6,871,226 B1	3/2005	Ensley et al.
6,009,458 A *	12/1999	Hawkins et al. 709/203	6,873,610 B1	3/2005	Noever
6,015,344 A	1/2000	Kelly et al.	6,884,166 B2	4/2005	Leen et al.
6,016,337 A	1/2000	Pykalisto	6,884,172 B1	4/2005	Lloyd et al.
6,038,599 A	3/2000	Black	6,887,159 B2	5/2005	Leen et al.
6,042,477 A	3/2000	Addink	6,888,929 B1	5/2005	Saylor
6,064,449 A	5/2000	White	6,893,347 B1	5/2005	Ziliacus et al.
6,104,815 A	8/2000	Alcorn et al.	6,898,762 B2	5/2005	Ellis et al.
6,110,041 A	8/2000	Walker et al.	6,899,628 B2	5/2005	Leen et al.
6,117,013 A	9/2000	Elba	6,903,681 B2	6/2005	Faris
6,126,543 A	10/2000	Friedman	6,908,389 B1	6/2005	Puskala
6,128,660 A	10/2000	Grimm	6,942,574 B1	9/2005	LeMay et al.
6,135,881 A	10/2000	Abbott et al.	6,944,228 B1	9/2005	Dakss et al.
6,154,131 A	11/2000	Jones, II	6,960,088 B1	11/2005	Long
6,174,237 B1	1/2001	Stephenson	6,978,053 B1	12/2005	Sarachik et al.
6,182,084 B1	1/2001	Cockrell et al.	7,001,279 B1	2/2006	Barber et al.
6,193,610 B1	2/2001	Junkin	7,029,394 B2	4/2006	Leen et al.
6,222,642 B1	4/2001	Farrell et al.	7,035,626 B1	4/2006	Luciano, Jr.
6,233,736 B1	5/2001	Wolzien	7,035,653 B2	4/2006	Simon et al.
6,251,017 B1	6/2001	Leason et al.	7,058,592 B1	6/2006	Heckerman et al.
6,267,670 B1	7/2001	Walker	7,076,434 B1	7/2006	Newman et al.
6,287,199 B1	9/2001	McKeown et al.	7,085,552 B2	8/2006	Buckley
6,293,868 B1	9/2001	Bernard	7,116,310 B1	10/2006	Evans et al.
6,312,336 B1	11/2001	Handelman et al.	7,117,517 B1	10/2006	Milazzo et al.
6,343,320 B1	1/2002	Fairchild	7,120,924 B1	10/2006	Katcher et al.
6,345,297 B1	2/2002	Grimm	7,124,410 B2	10/2006	Berg
6,371,855 B1	4/2002	Gavrilloff	7,125,336 B2	10/2006	Anttila et al.
6,373,462 B1	4/2002	Pan	7,136,871 B2	11/2006	Ozer et al.
6,411,969 B1	6/2002	Tam	7,144,011 B2	12/2006	Asher et al.
6,416,414 B1	7/2002	Stadelmann	7,169,050 B1	1/2007	Tyler
6,418,298 B1	7/2002	Sonnenfeld	7,185,355 B1	2/2007	Ellis
6,425,828 B2	7/2002	Walker et al.	7,187,658 B2	3/2007	Koyanagi
6,434,398 B1	8/2002	Inselberg	7,191,447 B1	3/2007	Ellis et al.
6,446,262 B1	9/2002	Malaure et al.	7,192,352 B2	3/2007	Walker et al.
6,470,180 B1	10/2002	Kotzin et al.	7,194,758 B1	3/2007	Waki et al.
6,475,090 B2	11/2002	Gregory	7,228,349 B2	6/2007	Barone, Jr. et al.
6,524,189 B1	2/2003	Rautila	7,231,630 B2	6/2007	Acott et al.
6,527,641 B1 *	3/2003	Sinclair et al. 463/39	7,233,922 B2	6/2007	Asher et al.
6,530,082 B1	3/2003	Del Sesto et al.	7,240,093 B1	7/2007	Danieli et al.
6,536,037 B1	3/2003	Guheen et al.	7,244,181 B2 *	7/2007	Wang et al. 463/42
6,578,068 B1	6/2003	Bowma-Amuah	7,249,367 B2	7/2007	Bove, Jr. et al.
6,594,098 B1	7/2003	Sutardja	7,254,605 B1	8/2007	Strum
6,604,997 B2	7/2003	Saidakovsky et al.	7,260,782 B2	8/2007	Wallace et al.
6,610,953 B1	8/2003	Tao et al.	RE39,818 E	9/2007	Slifer
6,648,760 B1	11/2003	Nicastro	7,283,830 B2	10/2007	Buckley
6,659,860 B1	12/2003	Yamamoto et al.	7,288,027 B2	10/2007	Overton
6,659,861 B1	12/2003	Faris	7,341,517 B2	3/2008	Asher et al.
6,659,872 B1	12/2003	Kaufman et al.	7,343,617 B1	3/2008	Kartcher et al.
6,690,661 B1	2/2004	Agarwal et al.	7,347,781 B2	3/2008	Schultz
6,697,869 B1	2/2004	Mallart	7,351,149 B1	4/2008	Simon et al.
6,718,350 B1	4/2004	Karbowski	7,367,042 B1	4/2008	Dakss et al.
6,752,396 B2	6/2004	Smith	7,379,705 B1	5/2008	Rados et al.
6,758,754 B1	7/2004	Lavanchy et al.	7,389,144 B1	6/2008	Osorio
6,758,755 B2	7/2004	Kelly et al.	7,430,718 B2	9/2008	Garipey-Viles
6,760,595 B2	7/2004	Insellberg	7,452,273 B2	11/2008	Amaitis et al.
6,763,377 B1	7/2004	Balknap et al.	7,460,037 B2	12/2008	Cattone et al.
6,766,524 B1	7/2004	Matheny et al.	7,461,067 B2	12/2008	Dewing et al.
6,774,926 B1	8/2004	Ellis et al.	7,502,610 B2	3/2009	Maher
6,785,561 B1	8/2004	Kim	7,510,474 B2	3/2009	Carter, Sr.
6,801,380 B1	10/2004	Satardja	7,517,282 B1	4/2009	Pryor
6,806,889 B1	10/2004	Malaure et al.	7,534,169 B2	5/2009	Amaitis et al.
6,807,675 B1	10/2004	Millard et al.	7,543,052 B1	6/2009	Cesa Klein
6,811,482 B2	11/2004	Letovsky	7,562,134 B1	7/2009	Fingerhut et al.
6,811,487 B2	11/2004	Sengoku	7,602,808 B2	10/2009	Ullmann
6,816,628 B1	11/2004	Sarachik et al.	7,610,330 B1	10/2009	Quinn
6,817,947 B2	11/2004	Tanskanen	7,614,944 B1	11/2009	Hughes et al.
6,824,469 B2	11/2004	Allibhoy et al.	7,630,986 B1	12/2009	Herz et al.
6,837,789 B2	1/2005	Garahi et al.	7,693,781 B2	4/2010	Asher et al.
6,837,791 B1	1/2005	McNutt et al.	7,699,707 B2	4/2010	Bahou
6,840,861 B2	1/2005	Jordan et al.	7,702,723 B2	4/2010	Dyl
6,845,389 B1	1/2005	Sen	7,711,628 B2	5/2010	Davie et al.
6,846,239 B2	1/2005	Washio	7,729,286 B2	6/2010	Mishra
6,857,122 B1	2/2005	Takeda et al.	7,753,772 B1	7/2010	Walker
6,863,610 B2	3/2005	Vancraeynest	7,753,789 B2	7/2010	Walker et al.
6,870,720 B2	3/2005	Iwata et al.	7,780,528 B2	8/2010	Hirayama
			7,828,661 B1	11/2010	Fish
			7,835,961 B2	11/2010	Davie et al.
			7,860,993 B2	12/2010	Chintala
			7,886,003 B2	2/2011	Newman

US 11,736,771 B2

Page 4

(56)

References Cited

U.S. PATENT DOCUMENTS

7,907,211 B2	3/2011	Oostveen et al.	8,935,715 B2	1/2015	Cibula et al.
7,907,598 B2	3/2011	Anisimov	9,056,251 B2	6/2015	Lockton
7,909,332 B2	3/2011	Root	9,067,143 B2	6/2015	Lockton et al.
7,925,756 B1	4/2011	Riddle	9,069,651 B2	6/2015	Barber
7,926,810 B2	4/2011	Fisher et al.	9,076,303 B1	7/2015	Park
7,937,318 B2	5/2011	Davie et al.	9,098,883 B2	8/2015	Asher et al.
7,941,482 B2	5/2011	Bates	9,111,417 B2	8/2015	Leen et al.
7,941,804 B1	5/2011	Herington	9,205,339 B2	12/2015	Cibula et al.
7,976,389 B2	7/2011	Cannon et al.	9,233,293 B2	1/2016	Lockton
8,002,618 B1	8/2011	Lockton et al.	9,258,601 B2	2/2016	Lockton et al.
8,006,314 B2	8/2011	Wold	9,270,789 B2	2/2016	Huske et al.
8,025,565 B2	9/2011	Leen et al.	9,289,692 B2	3/2016	Barber
8,028,315 B1	9/2011	Barber	9,306,952 B2	4/2016	Burman et al.
8,082,150 B2	12/2011	Wold	9,314,686 B2	4/2016	Lockton
8,086,445 B2	12/2011	Wold et al.	9,314,701 B2	4/2016	Lockton et al.
8,086,510 B2	12/2011	Amaitis et al.	9,355,518 B2	5/2016	Amaitis et al.
8,092,303 B2	1/2012	Amaitis et al.	9,406,189 B2	8/2016	Scott et al.
8,092,306 B2	1/2012	Root	9,430,901 B2	8/2016	Amaitis et al.
8,105,141 B2	1/2012	Leen et al.	9,457,272 B2	10/2016	Lockton et al.
8,107,674 B2	1/2012	Davis et al.	9,498,724 B2	11/2016	Lockton et al.
8,109,827 B2	2/2012	Cahill et al.	9,501,904 B2	11/2016	Lockton
8,128,474 B2	3/2012	Amaitis et al.	9,504,922 B2	11/2016	Lockton et al.
8,147,313 B2	4/2012	Amaitis et al.	9,511,287 B2	12/2016	Lockton et al.
8,147,373 B2	4/2012	Amaitis et al.	9,526,991 B2	12/2016	Lockton et al.
8,149,530 B1	4/2012	Lockton et al.	9,536,396 B2	1/2017	Amaitis et al.
8,155,637 B2	4/2012	Fujisawa	9,556,991 B2	1/2017	Furuya
8,162,759 B2	4/2012	Yamaguchi	9,604,140 B2	3/2017	Lockton et al.
8,176,518 B1	5/2012	Junkin et al.	9,652,937 B2	5/2017	Lockton
8,186,682 B2	5/2012	Amaitis et al.	9,662,576 B2	5/2017	Lockton et al.
8,204,808 B2	6/2012	Amaitis et al.	9,662,577 B2	5/2017	Lockton et al.
8,219,617 B2	7/2012	Ashida	9,672,692 B2	6/2017	Lockton
8,240,669 B2	8/2012	Asher et al.	9,687,738 B2	6/2017	Lockton et al.
8,246,048 B2	8/2012	Amaitis et al.	9,687,739 B2	6/2017	Lockton et al.
8,267,403 B2	9/2012	Fisher et al.	9,707,482 B2	7/2017	Lockton et al.
8,342,924 B2	1/2013	Leen et al.	9,716,918 B1	7/2017	Lockton et al.
8,342,942 B2	1/2013	Amaitis et al.	9,724,603 B2	8/2017	Lockton et al.
8,353,763 B2	1/2013	Amaitis et al.	9,744,453 B2	8/2017	Lockton et al.
8,376,855 B2	2/2013	Lockton et al.	9,805,549 B2	10/2017	Asher et al.
8,396,001 B2	3/2013	Jung	9,821,233 B2	11/2017	Lockton et al.
8,397,257 B1	3/2013	Barber	9,878,243 B2	1/2018	Lockton et al.
8,465,021 B2	6/2013	Asher et al.	9,881,337 B2	1/2018	Jaycob et al.
8,473,393 B2	6/2013	Davie et al.	9,901,820 B2	2/2018	Lockton et al.
8,474,819 B2	7/2013	Asher et al.	9,908,053 B2	3/2018	Lockton et al.
8,535,138 B2	9/2013	Amaitis et al.	9,919,210 B2	3/2018	Lockton
8,538,563 B1	9/2013	Barber	9,919,211 B2	3/2018	Lockton et al.
8,543,487 B2	9/2013	Asher et al.	9,919,221 B2	3/2018	Lockton et al.
8,555,313 B2	10/2013	Newman	9,978,217 B2	5/2018	Lockton
8,556,691 B2	10/2013	Leen et al.	9,993,730 B2	6/2018	Lockton et al.
8,585,490 B2	11/2013	Amaitis et al.	9,999,834 B2	6/2018	Lockton et al.
8,622,798 B2	1/2014	Lockton et al.	10,052,557 B2	8/2018	Lockton et al.
8,632,392 B2	1/2014	Shore et al.	10,089,815 B2	10/2018	Asher et al.
8,634,943 B2	1/2014	Root	10,096,210 B2	10/2018	Amaitis et al.
8,638,517 B2	1/2014	Lockton et al.	10,137,369 B2	11/2018	Lockton et al.
8,641,511 B2	2/2014	Ginsberg et al.	10,150,031 B2	12/2018	Lockton et al.
8,659,848 B2	2/2014	Lockton et al.	10,165,339 B2	12/2018	Huske et al.
8,672,751 B2	3/2014	Leen et al.	10,186,116 B2	1/2019	Lockton
8,699,168 B2	4/2014	Lockton et al.	10,195,526 B2	2/2019	Lockton et al.
8,705,195 B2	4/2014	Lockton	10,226,698 B1	3/2019	Lockton et al.
8,708,789 B2	4/2014	Asher et al.	10,226,705 B2	3/2019	Lockton et al.
8,717,701 B2	5/2014	Lockton et al.	10,232,270 B2	3/2019	Lockton et al.
8,727,352 B2	5/2014	Amaitis et al.	10,248,290 B2	4/2019	Galfond
8,734,227 B2	5/2014	Leen et al.	10,279,253 B2	5/2019	Lockton
8,737,004 B2	5/2014	Lockton et al.	10,360,767 B2	7/2019	Russell et al.
8,738,694 B2	5/2014	Huske et al.	10,569,175 B2	2/2020	Kosai et al.
8,771,058 B2	7/2014	Alderucci et al.	10,653,955 B2	5/2020	Lockton
8,780,482 B2	7/2014	Lockton et al.	10,695,672 B2	6/2020	Lockton et al.
8,805,732 B2	8/2014	Davie et al.	10,709,987 B2	7/2020	Lockton et al.
8,813,112 B1	8/2014	Cibula et al.	10,721,543 B2	7/2020	Huske et al.
8,814,664 B2	8/2014	Amaitis et al.	10,981,070 B2	4/2021	Isgreen
8,817,408 B2	8/2014	Lockton et al.	2001/0004609 A1	6/2001	Walker et al.
8,837,072 B2	9/2014	Lockton et al.	2001/0005670 A1	6/2001	Lahtinen
8,849,225 B1	9/2014	Choti	2001/0013067 A1	8/2001	Koyanagi
8,849,255 B2	9/2014	Choti	2001/0013125 A1	8/2001	Kitsukawa et al.
8,858,313 B1	10/2014	Selfors	2001/0020298 A1	9/2001	Rector, Jr. et al.
8,870,639 B2	10/2014	Lockton et al.	2001/0032333 A1	10/2001	Flickinger
			2001/0036272 A1	11/2001	Hirayama
			2001/0036853 A1	11/2001	Thomas
			2001/0044339 A1	11/2001	Cordero
			2001/0054019 A1	12/2001	de Fabrega

US 11,736,771 B2

Page 5

(56)

References Cited

U.S. PATENT DOCUMENTS

2002/0010789 A1	1/2002	Lord	2003/0189668 A1	10/2003	Newman et al.
2002/0018477 A1	2/2002	Katz	2003/0195023 A1	10/2003	Di Cesare
2002/0026321 A1	2/2002	Faris	2003/0195807 A1	10/2003	Maggio
2002/0029381 A1	3/2002	Inselberg	2003/0208579 A1	11/2003	Brady et al.
2002/0035609 A1	3/2002	Lessard	2003/0211856 A1	11/2003	Zilliacus
2002/0037766 A1	3/2002	Muniz	2003/0212691 A1	11/2003	Kuntala et al.
2002/0069265 A1	3/2002	Bountour	2003/0216185 A1	11/2003	Varley
2002/0042293 A1	4/2002	Ubale et al.	2003/0216857 A1	11/2003	Feldman et al.
2002/0046099 A1	4/2002	Frengut et al.	2003/0228866 A1	12/2003	Pezeshki
2002/0054088 A1	5/2002	Tanskanen et al.	2003/0233425 A1	12/2003	Lyons et al.
2002/0055385 A1 *	5/2002	Otsu 463/42	2004/0005919 A1	1/2004	Walker et al.
2002/0056089 A1	5/2002	Houston	2004/0014524 A1	1/2004	Pearlman
2002/0059094 A1	5/2002	Hosea et al.	2004/0015442 A1	1/2004	Hmlinen
2002/0059623 A1	5/2002	Rodriguez et al.	2004/0022366 A1	2/2004	Ferguson et al.
2002/0069076 A1	6/2002	Faris	2004/0025190 A1	2/2004	McCalla
2002/0076084 A1	6/2002	Tian	2004/0056897 A1	3/2004	Ueda
2002/0078176 A1	6/2002	Nomura et al.	2004/0060063 A1	3/2004	Russ et al.
2002/0083461 A1	6/2002	Hutcheson	2004/0073915 A1	4/2004	Dureau
2002/0091833 A1	7/2002	Grimm	2004/0088729 A1	5/2004	Petrovic et al.
2002/0094869 A1	7/2002	Harkham	2004/0093302 A1	5/2004	Baker et al.
2002/0095333 A1	7/2002	Jokinen et al.	2004/0152454 A1	5/2004	Kauppinen
2002/0097983 A1	7/2002	Wallace et al.	2004/0107138 A1	6/2004	Maggio
2002/0099709 A1	7/2002	Wallace	2004/0117831 A1	6/2004	Ellis et al.
2002/0100063 A1	7/2002	Herigstad et al.	2004/0117839 A1	6/2004	Watson et al.
2002/0103696 A1	8/2002	Huang et al.	2004/0128319 A1	7/2004	Davis et al.
2002/0105535 A1	8/2002	Wallace et al.	2004/0139158 A1	7/2004	Datta
2002/0107073 A1	8/2002	Binney	2004/0139482 A1	7/2004	Hale
2002/0108112 A1	8/2002	Wallace et al.	2004/0148638 A1	7/2004	Weisman et al.
2002/0108125 A1	8/2002	Joao	2004/0152517 A1	8/2004	Haedisty
2002/0108127 A1	8/2002	Lew et al.	2004/0152519 A1	8/2004	Wang
2002/0112249 A1	8/2002	Hendricks et al.	2004/0158855 A1	8/2004	Gu et al.
2002/0115488 A1	8/2002	Berry et al.	2004/0162124 A1	8/2004	Barton et al.
2002/0119821 A1	8/2002	Sen	2004/0166873 A1	8/2004	Simic
2002/0120930 A1	8/2002	Yona	2004/0176162 A1	9/2004	Rothschild
2002/0124247 A1	9/2002	Houghton	2004/0178923 A1	9/2004	Kuang
2002/0132614 A1	9/2002	Vanlujit et al.	2004/0183824 A1	9/2004	Benson
2002/0133817 A1	9/2002	Markel	2004/0185881 A1	9/2004	Lee
2002/0133827 A1	9/2002	Newman et al.	2004/0190779 A1	9/2004	Sarachik et al.
2002/0142843 A1	10/2002	Roelofs	2004/0198495 A1	10/2004	Cisneros et al.
2002/0144273 A1	10/2002	Reto	2004/0201626 A1	10/2004	Lavoie
2002/0147049 A1	10/2002	Carter, Sr.	2004/0203667 A1	10/2004	Shroder
2002/0157002 A1	10/2002	Messerges et al.	2004/0203898 A1	10/2004	Bodin et al.
2002/0157005 A1	10/2002	Bunk	2004/0210507 A1	10/2004	Asher et al.
2002/0159576 A1	10/2002	Adams	2004/0215756 A1	10/2004	VanAntwerp
2002/0162031 A1	10/2002	Levin et al.	2004/0216161 A1	10/2004	Barone, Jr. et al.
2002/0162117 A1	10/2002	Pearson	2004/0216171 A1	10/2004	Barone, Jr. et al.
2002/0165020 A1	11/2002	Koyama	2004/0224750 A1	11/2004	Ai-Ziyoud
2002/0165025 A1	11/2002	Kawahara	2004/0242321 A1	12/2004	Overton
2002/0177483 A1	11/2002	Cannon	2004/0266513 A1	12/2004	Odom
2002/0184624 A1	12/2002	Spencer	2005/0005303 A1	1/2005	Barone, Jr. et al.
2002/0187825 A1	12/2002	Tracy	2005/0021942 A1	1/2005	Diehl et al.
2002/0198050 A1	12/2002	Patchen	2005/0026699 A1	2/2005	Kinzer et al.
2003/0002638 A1	1/2003	Kaars	2005/0028208 A1	2/2005	Ellis
2003/0003997 A1	1/2003	Vuong et al.	2005/0043094 A1	2/2005	Nguyen et al.
2003/0013528 A1	1/2003	Allibhoy et al.	2005/0060219 A1	3/2005	Deitering et al.
2003/0023547 A1	1/2003	France	2005/0076371 A1	4/2005	Nakamura
2003/0040363 A1	2/2003	Sandberg	2005/0077997 A1	4/2005	Landram
2003/0054885 A1	3/2003	Pinto et al.	2005/0097599 A1	5/2005	Potnick et al.
2003/0060247 A1	3/2003	Goldberg et al.	2005/0101309 A1	5/2005	Croome
2003/0066089 A1	4/2003	Anderson	2005/0113164 A1	5/2005	Buecheler et al.
2003/0069828 A1	4/2003	Blazey et al.	2005/0003878 A1	6/2005	Updike
2003/0070174 A1	4/2003	Solomon	2005/0131984 A1	6/2005	Hofmann et al.
2003/0078924 A1	4/2003	Liechty et al.	2005/0138668 A1	6/2005	Gray et al.
2003/0086691 A1	5/2003	Yu	2005/0144102 A1	6/2005	Johnson
2003/0087652 A1	5/2003	Simon et al.	2005/0155083 A1	7/2005	Oh
2003/0088648 A1	5/2003	Bellaton	2005/0177861 A1	8/2005	Ma et al.
2003/0114224 A1	6/2003	Anttila et al.	2005/0210526 A1	9/2005	Levy et al.
2003/0115152 A1	6/2003	Flaherty	2005/0216838 A1	9/2005	Graham
2003/0125109 A1	7/2003	Green	2005/0235043 A1	10/2005	Teodosiu et al.
2003/0134678 A1	7/2003	Tanaka	2005/0239551 A1	10/2005	Griswold
2003/0144017 A1	7/2003	Inselberg	2005/0255901 A1	11/2005	Kreutzer
2003/0154242 A1	8/2003	Hayes et al.	2005/0256895 A1	11/2005	Dussault
2003/0165241 A1	9/2003	Fransdonk	2005/0266869 A1	12/2005	Jung
2003/0177167 A1 *	9/2003	Lafage et al. 709/200	2005/0267969 A1	12/2005	Poikselka et al.
2003/0177504 A1	9/2003	Paulo et al.	2005/0273804 A1	12/2005	Preisman
			2005/0283800 A1	12/2005	Ellis et al.
			2005/0288080 A1	12/2005	Lockton et al.
			2005/0288101 A1	12/2005	Lockton et al.
			2005/0288812 A1	12/2005	Cheng

US 11,736,771 B2

Page 6

(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0020700 A1	1/2006	Qiu	2009/0011781 A1	1/2009	Merrill et al.
2006/0025070 A1	2/2006	Kim et al.	2009/0094632 A1	4/2009	Newman et al.
2006/0046810 A1	3/2006	Tabata	2009/0103892 A1	4/2009	Hirayama
2006/0047772 A1	3/2006	Crutcher	2009/0186676 A1	7/2009	Amaitis et al.
2006/0053390 A1	3/2006	Garipey-Viles	2009/0163271 A1	9/2009	George et al.
2006/0058103 A1	3/2006	Danieli	2009/0228351 A1	9/2009	Rijsenbrij
2006/0059161 A1	3/2006	Millett et al.	2009/0234674 A1	9/2009	Wurster
2006/0063590 A1	3/2006	Abassi et al.	2009/0264188 A1	10/2009	Soukup
2006/0082068 A1	4/2006	Patchen	2009/0271512 A1	10/2009	Jorgensen
2006/0087585 A1	4/2006	Seo	2009/0325716 A1	12/2009	Harari
2006/0089199 A1	4/2006	Jordan et al.	2010/0099421 A1	4/2010	Patel et al.
2006/0094409 A1	5/2006	Inselberg	2010/0099471 A1	4/2010	Feeney et al.
2006/0101492 A1	5/2006	Lowcock	2010/0107194 A1	4/2010	McKissick et al.
2006/0111168 A1	5/2006	Nguyen	2010/0120503 A1	5/2010	Hoffman et al.
2006/0135253 A1	6/2006	George et al.	2010/0137057 A1	6/2010	Fleming
2006/0148569 A1	7/2006	Beck	2010/0203936 A1	8/2010	Levy
2006/0156371 A1	7/2006	Maetz et al.	2010/0279764 A1	11/2010	Allen et al.
2006/0160597 A1	7/2006	Wright	2010/0296511 A1	11/2010	Prodan
2006/0174307 A1	8/2006	Hwang et al.	2011/0016224 A1	1/2011	Riley
2006/0183547 A1	8/2006	McMonigle	2011/0053681 A1	3/2011	Goldman
2006/0183548 A1	8/2006	Morris et al.	2011/0065490 A1	3/2011	Lutnick
2006/0190654 A1	8/2006	Joy	2011/0081958 A1	4/2011	Herman
2006/0205483 A1	9/2006	Meyer et al.	2011/0116461 A1	5/2011	Holt
2006/0205509 A1	9/2006	Hirota	2011/0130197 A1	6/2011	Bythar et al.
2006/0205510 A1	9/2006	Lauper	2011/0227287 A1	9/2011	Reabe
2006/0217198 A1	9/2006	Johnson	2011/0269548 A1	11/2011	Barclay et al.
2006/0236352 A1	10/2006	Scott, III	2011/0306428 A1	12/2011	Lockton et al.
2006/0248553 A1	11/2006	Mikkelsen et al.	2012/0058808 A1	3/2012	Lockton
2006/0248564 A1	11/2006	Zinevitch	2012/0115585 A1	5/2012	Goldman
2006/0256865 A1	11/2006	Westerman	2012/0157178 A1	6/2012	Lockton
2006/0256868 A1	11/2006	Westerman	2012/0264496 A1	10/2012	Behrman et al.
2006/0269120 A1	11/2006	Mehmadi et al.	2012/0282995 A1	11/2012	Allen et al.
2006/0285586 A1	12/2006	Westerman	2012/0295686 A1	11/2012	Lockton
2007/0004516 A1	1/2007	Jordan et al.	2013/0005453 A1	1/2013	Nguyen et al.
2007/0013547 A1	1/2007	Boaz	2013/0072271 A1	3/2013	Lockton et al.
2007/0019826 A1	1/2007	Horbach et al.	2013/0079081 A1	3/2013	Lockton et al.
2007/0028272 A1	2/2007	Lockton	2013/0079092 A1	3/2013	Lockton et al.
2007/0037623 A1	2/2007	Romik	2013/0079093 A1	3/2013	Lockton et al.
2007/0054695 A1	3/2007	Huske et al.	2013/0079135 A1	3/2013	Lockton et al.
2007/0078009 A1	4/2007	Lockton et al.	2013/0079150 A1	3/2013	Lockton et al.
2007/0083920 A1	4/2007	Mizoguchi et al.	2013/0079151 A1	3/2013	Lockton et al.
2007/0086465 A1	4/2007	Paila et al.	2013/0196774 A1	8/2013	Lockton et al.
2007/0087832 A1	4/2007	Abbott	2013/0225285 A1	8/2013	Lockton
2007/0093296 A1	4/2007	Asher	2013/0225299 A1	8/2013	Lockton
2007/0106721 A1	5/2007	Schloter	2014/0031134 A1	1/2014	Lockton et al.
2007/0107010 A1	5/2007	Jolna et al.	2014/0100011 A1	4/2014	Gingher
2007/0129144 A1	6/2007	Katz	2014/0106832 A1	4/2014	Lockton et al.
2007/0147870 A1	7/2007	Nagashima et al.	2014/0128139 A1	5/2014	Shuster et al.
2007/0162328 A1	7/2007	Reich	2014/0155130 A1	6/2014	Lockton et al.
2007/0183744 A1	8/2007	Koizumi	2014/0155134 A1	6/2014	Lockton
2007/0197247 A1	8/2007	Inselberg	2014/0206446 A1	7/2014	Lockton et al.
2007/0210908 A1	9/2007	Putterman et al.	2014/0237025 A1	8/2014	Huske et al.
2007/0219856 A1	9/2007	Ahmad-Taylor	2014/0248952 A1	9/2014	Cibula et al.
2007/0222652 A1	9/2007	Cattone et al.	2014/0256432 A1	9/2014	Lockton et al.
2007/0226062 A1	9/2007	Hughes et al.	2014/0279439 A1	9/2014	Brown
2007/0238525 A1	10/2007	Suomela	2014/0287832 A1	9/2014	Lockton et al.
2007/0243936 A1	10/2007	Binenstock et al.	2014/0309001 A1	10/2014	Root
2007/0244570 A1	10/2007	Speiser et al.	2014/0335961 A1	11/2014	Lockton et al.
2007/0244585 A1	10/2007	Speiser et al.	2014/0335962 A1	11/2014	Lockton et al.
2007/0244749 A1	10/2007	Speiser et al.	2014/0378212 A1	12/2014	Sims
2007/0265089 A1	11/2007	Robarts	2015/0011310 A1	1/2015	Lockton et al.
2007/0294410 A1	12/2007	Pandya	2015/0024814 A1	1/2015	Root
2008/0005037 A1	1/2008	Hammad	2015/0067732 A1	3/2015	Howe et al.
2008/0013927 A1	1/2008	Kelly et al.	2015/0148130 A1	5/2015	Cibula et al.
2008/0051201 A1	2/2008	Lore	2015/0238839 A1	8/2015	Lockton
2008/0066129 A1	3/2008	Katcher et al.	2015/0238873 A1	8/2015	Arnone et al.
2008/0076497 A1	3/2008	Kiskis et al.	2015/0258452 A1	9/2015	Lockton et al.
2008/0104630 A1	5/2008	Bruce	2015/0356831 A1	12/2015	Osibodu
2008/0146337 A1	6/2008	Halonen	2016/0023116 A1	1/2016	Wire
2008/0169605 A1	7/2008	Shuster et al.	2016/0045824 A1	2/2016	Lockton et al.
2008/0222672 A1	9/2008	Piesing	2016/0049049 A1	2/2016	Lockton
2008/0240681 A1	10/2008	Fukushima	2016/0054872 A1	2/2016	Cibula et al.
2008/0248865 A1	10/2008	Tedesco	2016/0082357 A1	3/2016	Lockton
2008/0270288 A1	10/2008	Butterly et al.	2016/0121208 A1	5/2016	Lockton et al.
2008/0288600 A1	11/2008	Clark	2016/0134947 A1	5/2016	Huske et al.
			2016/0217653 A1	7/2016	Meyer
			2016/0271501 A1	9/2016	Balsbaugh
			2016/0361647 A1	12/2016	Lockton et al.
			2016/0375362 A1	12/2016	Lockton et al.

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(56)

References Cited

U.S. PATENT DOCUMENTS

2017/0036110	A1	2/2017	Lockton et al.
2017/0036117	A1	2/2017	Lockton et al.
2017/0043259	A1	2/2017	Lockton et al.
2017/0053498	A1	2/2017	Lockton
2017/0065891	A1	3/2017	Lockton et al.
2017/0098348	A1	4/2017	Odom
2017/0103615	A1	4/2017	Theodosopoulos
2017/0128840	A1	5/2017	Croci
2017/0221314	A1	8/2017	Lockton
2017/0225071	A1	8/2017	Lockton et al.
2017/0225072	A1	8/2017	Lockton et al.
2017/0232340	A1	8/2017	Lockton
2017/0243438	A1	8/2017	Merati
2017/0249801	A1	8/2017	Malek
2017/0252649	A1	9/2017	Lockton et al.
2017/0259173	A1	9/2017	Lockton et al.
2017/0264961	A1	9/2017	Lockton
2017/0282067	A1	10/2017	Lockton et al.
2017/0296916	A1	10/2017	Lockton et al.
2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102 A3	6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999
JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01/039506 A2	5/2001
WO	01/65743 A1	9/2001
WO	02/03698 A1	10/2002
WO	2005064506 A1	7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007

WO	2007016575	2/2007
WO	2007041667	4/2007
WO	2008027811 A2	3/2008
WO	2008115858 A1	9/2008

OTHER PUBLICATIONS

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.
Ark 4.0 Standard Edition, Technical Overview www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.
“Understanding the Interactivity Between Television and Mobile commerce”, Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.
“Re: Multicast Based Voting System” www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.
“IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim”, www.isk.co.usk/NEWS/dotcom/ist_sportal.html.
“Modeling User Behavior in Networked Games by Tristan Henderson and Saleem Bhatti”, www.woodworm.cs.uml.edu/rprice/ep/henderson.
“SMS Based Voting and Survey System for Meetings”, www.abbit.be/technology/SMSSURVEY.html.
“PurpleAce Launches 3GSM Ringtone Competition”, www.wirelessdevnet.com/news/2005/jan/31/news6html.
“On the Performance of Protocols for collecting Responses over a Multiple-Access Channel”, Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.
Merriam-Webster, “Game” definition, <http://www.merriam-webster.com/dictionary/agme.pg.1>.
Ducheneaut et al., “The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game”, Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369. <http://help.yahoo.com/help/us/tourn/tourn-03.html>.
Pinnacle, “The basics of reverse line movement,” Jan. 19, 2018, Retrieved on Jan. 22, 2020, <http://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQSS7M3GD>.
Gambling Commission, “Virtual currencies, eSports and social casino gaming-position paper,” Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcommission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.
Sipko et al., “Machine learning for the prediction of professional tennis matches” In: MEng computing—final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.
Winview Game Producer, “Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo To Start This Holiday Season,” In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from, <http://www.winviewgames.com/press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.
The International Search Report and The Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.
The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

* cited by examiner

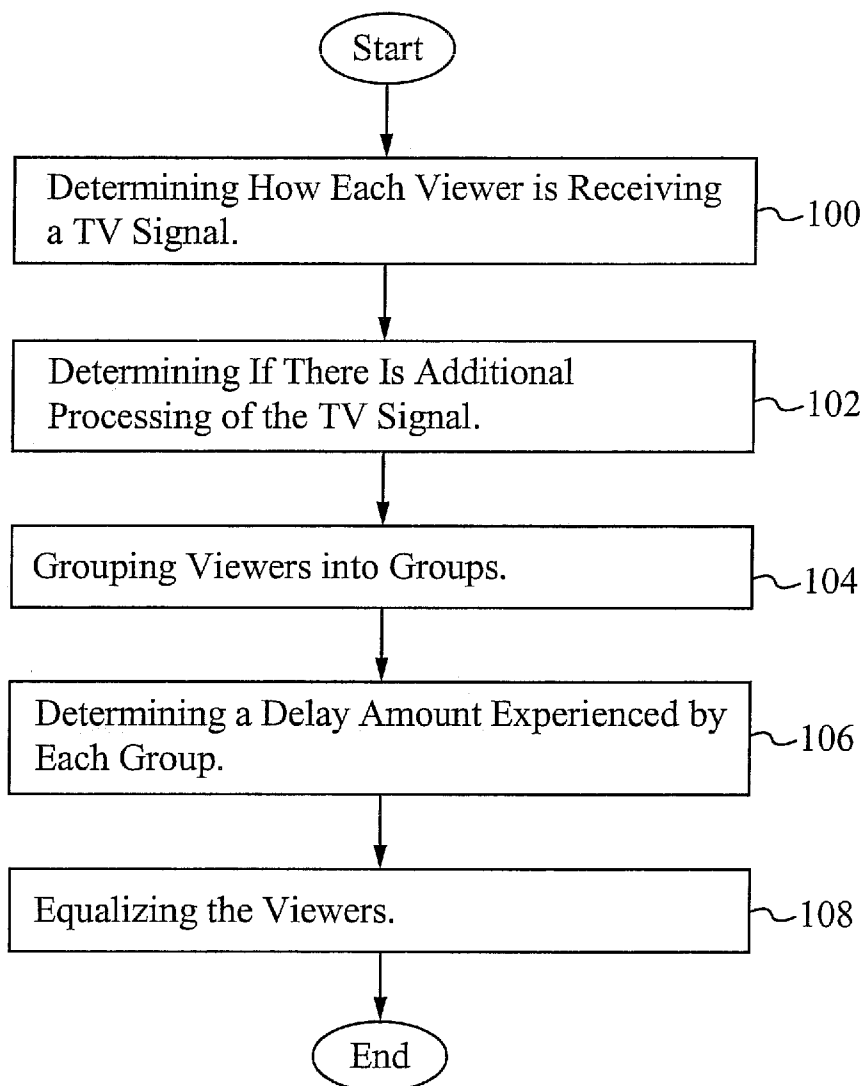


Fig. 1

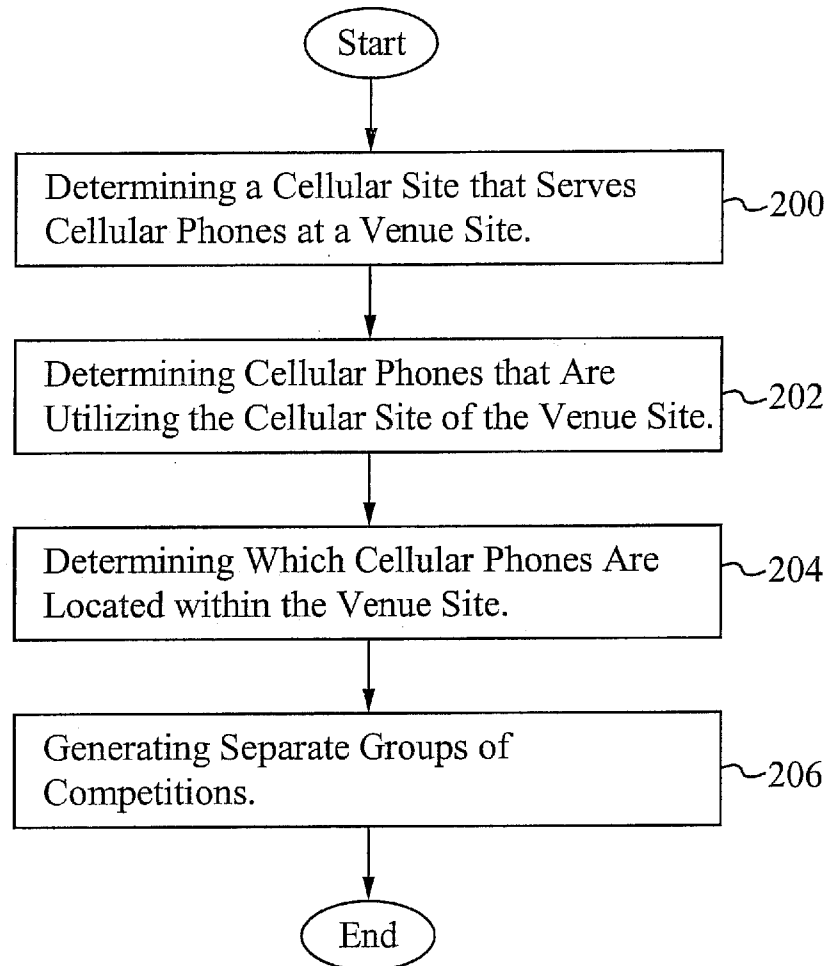


Fig. 2

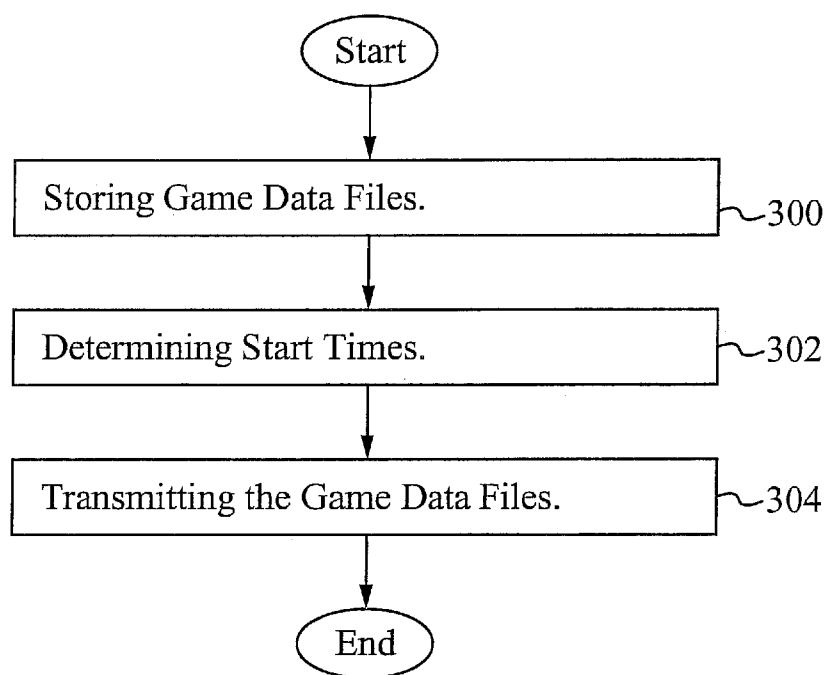


Fig. 3

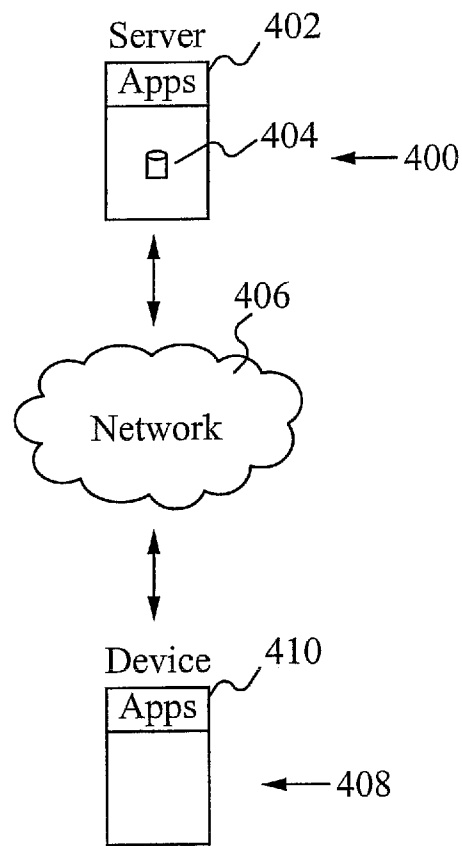


Fig. 4

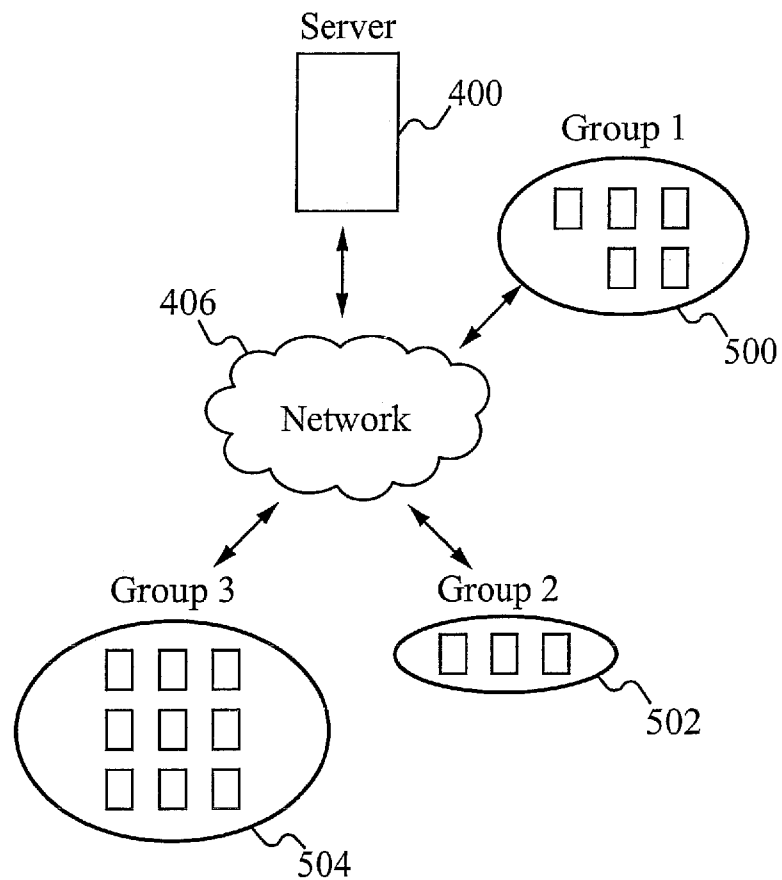


Fig. 5

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**METHODOLOGY FOR EQUALIZING
SYSTEMIC LATENCIES IN TELEVISION
RECEPTION IN CONNECTION WITH
GAMES OF SKILL PLAYED IN
CONNECTION WITH LIVE TELEVISION
PROGRAMMING**

RELATED APPLICATION(S)

This Patent Application is a continuation of co-pending U.S. patent application Ser. No. 16/752,541, filed Jan. 24, 2020, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 16/228,583, filed Dec. 20, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/963,970, filed Apr. 26, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 14/992,937, filed Jan. 11, 2016, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 14/140,198, filed Dec. 24, 2013, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 13/681,242, filed Nov. 19, 2012, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, (now U.S. Pat. No. 8,149,530), titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF

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SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish network may experience a 3 second delay compared to an

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individual in California using a cable network. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broad- casts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fair- ness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair enter- tainment.

In one aspect, a method of equalizing effects of latency differences in a game of skill comprises grouping partici- pants into a set of cohorts viewing a telecast delivered by identical transmission and reception systems, determining an amount of delay for each cohort in the set of cohorts and substantially equalizing the set of cohorts through adjust- ment of the amount of delay. The method further comprises determining how each participant receives a television signal. How each participant receives a television signal is selected from the group consisting of an over the air broad- cast, a cable system and a satellite system. The participants are grouped based on how the participants receive a televi- sion signal. The method further comprises determining if there is additional processing of a television signal in a reception location. The additional processing occurs within a participant's location selected from the group consisting of a public place, a home, an office and a bar. Since each cable system may impose different delay at their head-ends, the specific cable provider is identified. Determining the amount of delay comprises one or more of requiring the participants to answer questions related to their television system service, requiring the participants to mark on a game playing client device, a precise time that a predetermined audio or visual event is viewed on a television program, utilizing a GPS function in a cellular phone to determine a physical location of each of the participants, utilizing an employee of a game producer who is a member of each cohort in the set of cohorts to determine the amount of delay, inserting an artifact in the telecast in which the participants respond to, and establishing the amount of delay through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal, linked to a game server, to provide information related to a precise arrival of an underlying television picture. An average is taken when requiring participants to mark the precise time the predetermined audio or visual event is viewed on the television program. Equalizing the set of cohorts comprises at least one of time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise time of reception of the telecast by the group.

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In another aspect, a method of preventing a first set of participants at a live event from having an advantage over a second set of participants watching the live event on tele- vision comprises determining a cellular site that serves a set of cellular phones at a venue site, determining the set of cellular phones that are utilizing the cellular site of the venue site, determining a subset of cellular phones within the set of cellular phones that are located within the venue site and generating separate groups of competitions based on the subset of cellular phones within the set of cellular phones that are located within the venue site. A first group within the separate groups of competitions includes only the first set of participants and a second group within the separate groups of competitions includes only the second set of participants. An application on a server determines the cellular site, the set of cellular phones utilizing the cellular site and the subset of cellular phones located within the venue site. An appli- cation on each cellular phone within the subset of cellular phones determines if the cellular phone is located within the venue site.

In another aspect, a method of equalizing effects of latency issues with a taped television broadcast comprises storing a set of data files on a server, determining one or more start times and transmitting the set of files from the server to each mobile device at a transmission time corre- sponding to an appropriate start time for the mobile device. An application starts using the set of files at the one or more start times. The set of data files are game data files. Deter- mining the one or more start times includes at least one of utilizing an employee of a game provider based on visual observation of a telecast, utilizing at least one of an audio and video recognition system with online access to the broadcast for each separate market which provides real-time tracking of the broadcast to the server, adding at least one of an audio and video event in the television broadcast which is recognizable at a starting point, designating at least one of the audio and video event in the television broadcast which is recognizable as the starting point, utilizing an audio signal, inserted within the broadcast recognizable by an audio receiver of the mobile device, and using a vertical blanking interval.

In yet another aspect, a system for equalizing effects of latency issues for a game of skill comprises a mobile device and a server coupled to the mobile device wherein the server sends a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The mobile device is within a group of mobile devices. The server determines which group the mobile device is in. The server stores game control data and transmits the game control data to the mobile device. The game control data includes delay infor- mation for implementing the lockout signal. The server contains a location determination application for determin- ing the location of the mobile device. The mobile device contains a location determination application for determin- ing the location of the mobile device. Variances in delays in receiving the television signal determine delays in transmit- ting applicable data files within a television signal reception path

In another aspect, a device for equalizing effects of latency issues for a game of skill comprises a storage device and a set of applications contained within the storage device for sending a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submit- ting a response after they see the outcome. The set of applications determines which group mobile devices coupled to the device are in. The device stores game control

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data and transfers the game control data to mobile devices. The game control data includes delay information for implementing the lockout signal. The set of applications includes a location application for determining the location of mobile devices. The amount of delay accounts for delays within a television signal reception path.

A network of devices comprises a plurality of mobile devices and a server coupled to the mobile devices wherein the server groups the plurality of mobile devices into a set of cohorts and wherein the server sends a lockout signal at an appropriate time based on an amount of delay to prevent users from submitting a response after they see the outcome. Each cohort within the set of cohorts is based on a signal reception path. The signal reception path is selected from the group consisting of an over the air network, a cable network and a satellite network. The server stores game control data and transfers the game control data to each mobile device within the plurality of mobile devices. The game control data is specific for each cohort within the set of cohorts. The game control data includes delay information for equalizing the lockout signal. The amount of delay accounts for delays within a television signal reception path.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODS ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

The present invention addresses three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays of a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars.

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In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game is based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one

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who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the system addressed in the present invention is to ensure the competitors feel they are on equal footing.

The present invention solves the above described issue through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. The present invention relies on a variety of methodologies which are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where “lock out” signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as “cohorts.” For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable “head ends” or central broadcast points serving a “cohort.” This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts which are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

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In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider.

5 These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

10 In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers’ television sets.

15 In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

20 Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game “lock out” signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers’ cohort.

30 Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of “lock out” data relative to the event triggering the “lock out,” based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive “lock out” signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

45 Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the “lock out” signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step 100, it is determined how each viewer receives a television signal, where possibilities include an over the air broadcast, a particular cable system or a particular satellite system. In the step 102, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant’s house, office, bar or other location from an item such as a DVR. In the step 104, the viewers/participants are grouped into groups also

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referred to as cohorts. In the step 106, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step 108, the viewers/participants are equalized. The methods of equalization vary, but some examples include time stamping on the game "lock out" signals, imposing a time stamp on the entire data stream so that competitors receiving their television information is slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, Snap Smart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

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For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. The present invention is also able to involve a communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced though the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step 200, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step 202, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step 204, it is determined if the cellular phone is located within the venue site. The determination is made by comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step 204, separate groups are generated in the step 206. A group is generated for users that are located at the live venue, and

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a group is generated for those players that are watching live on television. Therefore, the live players who do not experience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of Fortune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local

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telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

This invention protects a system which first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped

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audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs. In the step 300, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step 302, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining start times are possible as well. In the step 304, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention. A server 400 contains applications 402 and a storage mechanism 404. The applications 402 include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server 400 is able to determine which cellular phones are logged into the server 400 and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism 404 is utilized for storing the applications 402 in addition to selections and results. The storage mechanism 404 preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server 400 is part of a network 406. A device 408 couples to the server 400 through the network 406. In some embodiments the network 406 includes the Internet. In some embodiments, the network 406 includes a cellular network. Also, in some embodiments, the network 406 includes both the Internet and a cellular network. The device 408 is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server 400 is possible. The device 408 stores a variety of applications 410. A game application is stored on the device 408. In some embodiments, software to identify the physical location of the device 408 is stored on the device 408. The device 408 also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device 408 receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server 400 and on the device 408, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention. A server 400 is coupled to many devices through a network 406. The devices are

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grouped into groups or cohorts as described above. For example, Group 1 of devices 500 includes a set of devices that receive a television signal through cable with a delay time of x. Group 2 of devices 502 includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices 504 includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

To utilize the present invention, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the present invention. The user simply plays as usual except that with the present invention, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, implementing the present invention is able to be automated or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the present invention is able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the

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attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the present invention ensures that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A server comprising:

a. a memory for storing an application for conducting one or more real-time games of skill or chance or other entertainment in connection with a sports event, the application configured for:

i. communicating with a plurality of devices grouped into a plurality of cohorts, wherein each cohort constitutes participants in one of the real-time games of skill or chance or other entertainment; and

ii. storing one or more files related to the one or more real-time games of skill or chance or other entertainment;

iii. simultaneously transmitting the one or more files to each of the devices within a cohort;

iv. sending one or more lockout signals at one or more appropriate times based on an amount of delay to prevent users from submitting one or more responses to the one or more real time games of skill or chance or other entertainment, wherein the at least one of the one or more lockout signals is based on information from an observer of the sports event; and

b. a processor for processing the application.

2. The server as claimed in claim 1 wherein the amount of delay for a cohort is based on an earliest signal reception by a member of the cohort.

3. The server as claimed in claim 2 wherein the signal reception is selected from the group consisting of an over the air network, a cable network, a satellite network, or one or more streamed signals.

4. The server as claimed in claim 1 wherein the server stores game control data and transfers the game control data to each device within the plurality of devices.

5. The server as claimed in claim 1 wherein the amount of delay is predetermined.

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6. The server as claimed in claim 5 wherein the game control data includes delay information for equalizing the lockout signal.

7. The server as claimed in claim 1 wherein the amount of delay accounts for delays within a television signal reception path.

8. The server as claimed in claim 4 wherein the game control data imposes a delay for equalizing the lockout signal.

9. The server as claimed in claim 4 wherein the game control data is based on one or more real-time data feeds.

10. The server as claimed in claim 9 wherein the one or more real-time data feeds originate from a venue of the sports event.

11. The server as claimed in claim 1 wherein the game of skill or chance or other entertainment is synchronized with a broadcast of the sports event.

12. The server as claimed in claim 11 wherein the broadcast is delivered online.

13. The server as claimed in claim 11 wherein questions are displayed at precise times before, during and after the commercials or pauses in the broadcast sent to the plurality of devices in synchronization with the broadcast.

14. The server as claimed in claim 1 wherein an earliest receipt of the lockout signal by participants is utilized for equalizing locking out all participants.

15. The server as claimed in claim 1 wherein an earliest lockout signal required to prevent participants receiving an earliest broadcast signal on a connected device is utilized for equalizing locking out all participants receiving a later broadcast signal.

16. The server as claimed in claim 1 wherein input data received by a server from the plurality of devices is further for determining a shortest delay for participants and applying the one or more lockout signals to the participants based on the shortest delay within a cohort.

17. The server as claimed in claim 1 wherein the observer is physically present at the sports event.

18. The server as claimed in claim 1 wherein each of the cohorts receives the sports event delivered by similar transmission and reception systems.

19. The server as claimed in claim 1 wherein each of the cohorts is grouped based on a time zone in which the mobile device is located.

20. The server as claimed in claim 1 wherein a first cohort is watching a first sports event and a second cohort is watching a second sports event.

21. The server as claimed in claim 1 wherein a person observes the event at a physical venue and is in communication with one or more producers of the game of skill or chance or other entertainment.

22. The server as claimed in claim 1 wherein the appropriate time for the one or more lockout signals occurs immediately before competitors are able to see or hear a play unfold.

23. The server as claimed in claim 1 wherein the appropriate time for the one or more lockout signals occurs immediately before a scoring chance in an event.

24. The server as claimed in claim 1 wherein the appropriate time for the one or more lockout signals involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

25. The server as claimed in claim 1 wherein the one or more lockout signals are able to apply for a limited amount of time and then removed permitting user input after the lockout signal is removed.

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26. The server as claimed in claim 1 wherein the one or more lockout signals are able to apply for an action lasting a limited amount of time.

27. The server as claimed in claim 1 wherein the amount of delay is based on latency of video signals received by a producer producing the one or more real-time games of skill or chance or other entertainment.

28. The server as claimed in claim 1 wherein the amount of delay is measured.

29. A server comprising:

a. a memory for storing an application, the application configured for:

i. communicating with a plurality of devices grouped into a set of cohorts, wherein each cohort constitutes participants in one or more real-time games of skill or chance or other entertainment;

ii. storing one or more files related to the one or more real-time games of skill or chance or other entertainment;

iii. simultaneously transmitting the one or more files to each of the devices within a cohort; and

iv. sending one or more lockout signals at one or more appropriate times based on an amount of delay to prevent users from submitting a response to the real-time game of skill or chance or other entertainment, wherein a first cohort of the set of cohorts is watching a first televised sports event, and a second cohort of the set of cohorts is watching a second televised sports event, wherein the at least one of the one or more lockout signals is based on information from an observer of the sports event; and

b. a processor for processing the application.

30. The server as claimed in claim 29 wherein the amount of delay is measured.

31. The server as claimed in claim 29 wherein the server stores game control data and transfers the game control data to each device within the plurality of devices.

32. The server as claimed in claim 29 wherein the amount of delay is predetermined.

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33. The server as claimed in claim 31 wherein the game control data includes delay information for equalizing the lockout signal.

34. The server as claimed in claim 29 wherein the amount of delay accounts for delays within a television signal reception path.

35. The server as claimed in claim 31 wherein the game control data imposes a delay for equalizing the lockout signal.

36. The server as claimed in claim 31 wherein the game control data is based on one or more real-time data feeds.

37. The server as claimed in claim 36 wherein the one or more real-time data feeds originate from a venue of the sports event.

38. The server as claimed in claim 29 wherein the observer is physically present at the sports event.

39. The server as claimed in claim 29 wherein a person observes the event at a physical venue and is in communication with one or more producers of the game of skill or chance or other entertainment.

40. The server as claimed in claim 29 wherein the appropriate time for the one or more lockout signals occurs immediately before competitors are able to see or hear a play unfold.

41. The server as claimed in claim 29 wherein the appropriate time for the one or more lockout signals occurs immediately before a scoring chance in an event.

42. The server as claimed in claim 29 wherein the appropriate time for the one or more lockout signals involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

43. The server as claimed in claim 29 wherein the one or more lockout signals are able to apply for a limited amount of time and then removed permitting user input after the lockout signal is removed.

44. The server as claimed in claim 29 wherein the one or more lockout signals are able to apply for an action lasting a limited amount of time.

* * * * *

Exhibit 7

US011918880B2

(12) **United States Patent**
Lockton

(10) **Patent No.:** **US 11,918,880 B2**

(45) **Date of Patent:** ***Mar. 5, 2024**

(54) **METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

2,010,516 A 8/1935 Hoffmann

2,051,615 A 8/1936 Miles

(Continued)

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FOREIGN PATENT DOCUMENTS

(73) Assignee: **Winview IP Holdings, LLC**, Charlotte, NC (US)

CA 2252074 11/1997
CA 2252021 11/1998

(Continued)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

OTHER PUBLICATIONS

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020, <http://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD>.

(Continued)

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(65) **Prior Publication Data**

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(Continued)

(52) **U.S. Cl.**

CPC **A63B 71/06** (2013.01); **A63F 13/31** (2014.09); **A63F 13/35** (2014.09); **A63F 13/795** (2014.09);

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(58) **Field of Classification Search**

CPC **A63B 71/06**; **A63F 13/31**; **A63F 13/35**; **A63F 13/795**; **A63F 13/80**; **G07F 17/32**;

(Continued)

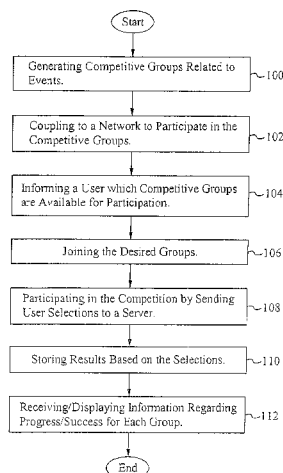
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(57) **ABSTRACT**

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated based on each competition group, so that users can continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

49 Claims, 3 Drawing Sheets



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Related U.S. Application Data

continuation of application No. 16/517,330, filed on Jul. 19, 2019, now Pat. No. 10,758,809, which is a continuation of application No. 15/956,619, filed on Apr. 18, 2018, now Pat. No. 10,410,474, which is a continuation of application No. 15/297,040, filed on Oct. 18, 2016, now Pat. No. 9,978,217, which is a continuation of application No. 14/956,217, filed on Dec. 1, 2015, now Pat. No. 9,501,904, which is a continuation of application No. 13/859,554, filed on Apr. 9, 2013, now Pat. No. 9,233,293, which is a continuation of application No. 13/246,464, filed on Sep. 27, 2011, now Pat. No. 9,056,251, which is a continuation-in-part of application No. 13/215,052, filed on Aug. 22, 2011, now Pat. No. 8,622,798, which is a continuation of application No. 11/652,240, filed on Jan. 10, 2007, now Pat. No. 8,002,618.

(60) Provisional application No. 60/757,960, filed on Jan. 10, 2006.

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(58) Field of Classification Search

CPC *G07F 17/3227*; *G07F 17/3241*; *G07F 17/3255*; *G07F 17/3276*; *G07F 17/3288*; *G07F 17/3293*; *G07F 17/3295*

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

2,193,638 A 3/1940 Morton
2,274,933 A 3/1942 Peck
2,831,105 A 4/1958 Parker
3,550,944 A 12/1970 Chamberlin
3,562,650 A 2/1971 Gossard et al.
3,689,071 A 9/1972 Kucera
4,141,548 A 2/1979 Everton
4,270,755 A 6/1981 Willhide et al.
4,386,377 A 5/1983 Hunter, Jr.
4,496,148 A 1/1985 Morstain et al.
4,521,803 A 6/1985 Glittinger
4,592,546 A 6/1986 Fascenda et al.
4,816,904 A 3/1989 McKenna et al.
4,918,603 A 4/1990 Hughes et al.
4,930,010 A 5/1990 MacDonald
5,013,038 A 5/1991 Luvenberg
5,018,736 A 5/1991 Pearson et al.
5,035,422 A 7/1991 Berman
5,073,931 A 12/1991 Audebert et al.
5,083,271 A 1/1992 Thatcher et al.
5,083,800 A 1/1992 Lockton
5,119,295 A 6/1992 Kapur
5,120,076 A 6/1992 Luxenberg et al.
5,213,337 A 5/1993 Sherman
5,227,874 A 7/1993 Von Kohorn
5,256,863 A 10/1993 Ferguson
5,263,723 A 11/1993 Pearson et al.
5,283,734 A 2/1994 Von Kohorn

5,327,485 A 7/1994 Leaden
5,343,236 A 8/1994 Koppe et al.
5,343,239 A 8/1994 Lappington et al.
5,417,424 A 5/1995 Snowden
5,462,275 A 10/1995 Lowe et al.
5,479,492 A 12/1995 Hofstee et al.
5,488,659 A 1/1996 Millani
5,519,433 A 5/1996 Lappington
5,530,483 A 6/1996 Cooper
5,553,120 A 9/1996 Katz
5,566,291 A 10/1996 Boulton et al.
5,585,975 A 12/1996 Bliss
5,586,257 A 12/1996 Perlman
5,589,765 A 12/1996 Ohmart et al.
5,594,938 A 1/1997 Engel
5,618,232 A 4/1997 Martin
5,628,684 A 5/1997 Jean-Etienne
5,636,920 A 6/1997 Shur et al.
5,638,113 A 6/1997 Lappington
5,643,088 A 7/1997 Vaughn et al.
5,663,757 A 9/1997 Morales
5,711,715 A 1/1998 Ringo
5,759,101 A 6/1998 Kohorn
5,761,606 A 6/1998 Wolzien
5,762,552 A 6/1998 Young et al.
5,764,275 A 6/1998 Lappington et al.
5,794,210 A 8/1998 Goldhaber et al.
5,805,230 A 9/1998 Staron
5,813,913 A 9/1998 Berner et al.
5,818,438 A 10/1998 Howe et al.
5,828,843 A 10/1998 Grimm
5,838,774 A 11/1998 Weiser, Jr.
5,838,909 A 11/1998 Roy
5,846,132 A 12/1998 Junkin
5,848,397 A 12/1998 Marsh et al.
5,860,862 A 1/1999 Junkin
5,882,260 A 3/1999 Marks
5,894,556 A 4/1999 Grimm
5,916,024 A 6/1999 Von Kohorn
5,870,683 A 9/1999 Wells et al.
5,970,143 A 10/1999 Schneier et al.
5,971,854 A 10/1999 Pearson et al.
5,987,440 A 11/1999 O'Neil et al.
6,009,458 A 12/1999 Hawkins et al.
6,015,344 A 1/2000 Kelly et al.
6,016,337 A 1/2000 Pykalisto
6,038,599 A 3/2000 Black
6,042,477 A 3/2000 Addink
6,064,449 A 5/2000 White
6,104,815 A 8/2000 Alcorn et al.
6,110,041 A 8/2000 Walker et al.
6,117,013 A 9/2000 Elba
6,126,543 A 10/2000 Friedman
6,128,660 A 10/2000 Grimm
6,135,881 A 10/2000 Abbott et al.
6,154,131 A 11/2000 Jones, II
6,174,237 B1 1/2001 Stephenson
6,182,084 B1 1/2001 Cockrell et al.
6,193,610 B1 2/2001 Junkin
6,222,642 B1 4/2001 Farrell et al.
6,233,736 B1 5/2001 Wolzien
6,251,017 B1 6/2001 Leason et al.
6,264,650 B1 7/2001 Goldberg
6,267,670 B1 7/2001 Walker
6,287,199 B1 9/2001 McKeown et al.
6,293,868 B1 9/2001 Bernard
6,312,336 B1 11/2001 Handelman et al.
6,343,320 B1 1/2002 Fairchild
6,345,297 B1 2/2002 Grimm
6,371,855 B1 4/2002 Gavriloff
6,373,462 B1 4/2002 Pan
6,411,969 B1 6/2002 Tam
6,416,414 B1 7/2002 Stadelmann
6,418,298 B1 7/2002 Sonnenfeld
6,425,828 B2 7/2002 Walker et al.
6,434,398 B1 8/2002 Inselberg
6,446,262 B1 9/2002 Malaure et al.
6,470,180 B1 10/2002 Kotzin et al.
6,475,090 B2 11/2002 Gregory

US 11,918,880 B2

Page 3

(56)

References Cited

U.S. PATENT DOCUMENTS

6,524,189	B1	2/2003	Rautila	7,194,758	B1	3/2007	Waki et al.
6,527,641	B1	3/2003	Sinclair et al.	7,228,349	B2	6/2007	Barone, Jr. et al.
6,530,082	B1	3/2003	Del Sesto et al.	7,231,630	B2	6/2007	Acott et al.
6,536,037	B1	3/2003	Guheen et al.	7,233,922	B2	6/2007	Asher et al.
6,537,150	B1	3/2003	Luciano	7,240,093	B1	7/2007	Danieli et al.
6,578,068	B1	6/2003	Bowma-Amuah	7,244,181	B2	7/2007	Wang et al.
6,594,098	B1	7/2003	Sutardja	7,249,367	B2	7/2007	Bove, Jr. et al.
6,604,997	B2	7/2003	Saidakovsky et al.	7,254,605	B1	8/2007	Strum
6,610,953	B1	8/2003	Tao et al.	7,260,782	B2	8/2007	Wallace et al.
6,611,755	B1	8/2003	Coffee	RE39,818	E	9/2007	Slifer
6,648,760	B1	11/2003	Nicastro	7,283,830	B2	10/2007	Buckley
6,659,860	B1	12/2003	Yamamoto et al.	7,288,027	B2	10/2007	Overton
6,659,861	B1	12/2003	Faris	7,341,517	B2	3/2008	Asher et al.
6,659,872	B1	12/2003	Kaufman et al.	7,343,617	B1	3/2008	Kartcher et al.
6,690,661	B1	2/2004	Agarwal et al.	7,347,781	B2	3/2008	Schultz
6,697,869	B1	2/2004	Mallart	7,351,149	B1	4/2008	Simon et al.
6,718,350	B1	4/2004	Karbowski	7,367,042	B1	4/2008	Dakss et al.
6,752,396	B2	6/2004	Smith	7,379,705	B1	5/2008	Rados et al.
6,758,754	B1	7/2004	Lavanchy et al.	7,389,144	B1	6/2008	Osorio
6,758,755	B2	7/2004	Kelly et al.	7,430,718	B2	9/2008	Garipey-Viles
6,760,595	B2	7/2004	Insellberg	7,452,273	B2	11/2008	Amaitis et al.
6,763,377	B1	7/2004	Balknap et al.	7,460,037	B2	12/2008	Cattone et al.
6,766,524	B1	7/2004	Matheny et al.	7,461,067	B2	12/2008	Dewing et al.
6,774,926	B1	8/2004	Ellis et al.	7,502,610	B2	3/2009	Maher
6,785,561	B1	8/2004	Kim	7,510,474	B2	3/2009	Carter, Sr.
6,801,380	B1	10/2004	Saturdja	7,517,282	B1	4/2009	Pryor
6,806,889	B1	10/2004	Malaure et al.	7,534,169	B2	5/2009	Amaitis et al.
6,807,675	B1	10/2004	Millard et al.	7,543,052	B1	6/2009	Cesa Klein
6,811,482	B2	11/2004	Letovsky	7,562,134	B1	7/2009	Fingerhut et al.
6,811,487	B2	11/2004	Sengoku	7,602,808	B2	10/2009	Ullmann
6,816,628	B1	11/2004	Sarachik et al.	7,610,330	B1	10/2009	Quinn
6,817,947	B2	11/2004	Tanskanen	7,614,944	B1	11/2009	Hughes et al.
6,824,469	B2	11/2004	Allibhoy et al.	7,630,986	B1	12/2009	Herz et al.
6,837,789	B2	1/2005	Garahi et al.	7,693,781	B2	4/2010	Asher et al.
6,837,791	B1	1/2005	McNutt et al.	7,699,707	B2	4/2010	Bahou
6,840,861	B2	1/2005	Jordan et al.	7,702,723	B2	4/2010	Dyl
6,845,389	B1	1/2005	Sen	7,711,628	B2	5/2010	Davie et al.
6,846,239	B2	1/2005	Washio	7,729,286	B2	6/2010	Mishra
6,857,122	B1	2/2005	Takeda et al.	7,753,772	B1	7/2010	Walker
6,863,610	B2	3/2005	Vancraeynest	7,753,789	B2	7/2010	Walker et al.
6,870,720	B2	3/2005	Iwata et al.	7,780,528	B2	8/2010	Hirayama
6,871,226	B1	3/2005	Ensley et al.	7,828,661	B1	11/2010	Fish
6,873,610	B1	3/2005	Noever	7,835,961	B2	11/2010	Davie et al.
6,884,166	B2	4/2005	Leen et al.	7,860,993	B2	12/2010	Chintala
6,884,172	B1	4/2005	Lloyd et al.	7,886,003	B2	2/2011	Newman
6,887,159	B2	5/2005	Leen et al.	7,907,211	B2	3/2011	Oostveen et al.
6,888,929	B1	5/2005	Saylor	7,907,598	B2	3/2011	Anisimov
6,893,347	B1	5/2005	Zilliacus et al.	7,909,332	B2	3/2011	Root
6,898,762	B2	5/2005	Ellis et al.	7,925,756	B1	4/2011	Riddle
6,899,628	B2	5/2005	Leen et al.	7,926,810	B2	4/2011	Fisher et al.
6,903,681	B2	6/2005	Faris	7,937,318	B2	5/2011	Davie et al.
6,908,389	B1	6/2005	Puskala	7,941,482	B2	5/2011	Bates
6,942,574	B1	9/2005	LeMay et al.	7,941,804	B1	5/2011	Herington
6,944,228	B1	9/2005	Dakss et al.	7,951,002	B1	5/2011	Brosnan
6,960,088	B1	11/2005	Long	7,976,389	B2	7/2011	Cannon et al.
6,978,053	B1	12/2005	Sarachik et al.	8,002,618	B1	8/2011	Lockton
7,001,279	B1	2/2006	Barber et al.	8,006,314	B2	8/2011	Wold
7,029,394	B2	4/2006	Leen et al.	8,025,565	B2	9/2011	Leen et al.
7,035,626	B1	4/2006	Luciano, Jr.	8,028,315	B1	9/2011	Barber
7,035,653	B2	4/2006	Simon et al.	8,082,150	B2	12/2011	Wold
7,058,592	B1	6/2006	Heckerman et al.	8,086,445	B2	12/2011	Wold et al.
7,076,434	B1	7/2006	Newman et al.	8,086,510	B2	12/2011	Amaitis et al.
7,085,552	B2	8/2006	Buckley	8,092,303	B2	1/2012	Amaitis et al.
7,116,310	B1	10/2006	Evans et al.	8,092,306	B2	1/2012	Root
7,117,517	B1	10/2006	Milazzo et al.	8,105,141	B2	1/2012	Leen et al.
7,120,924	B1	10/2006	Katcher et al.	8,107,674	B2	1/2012	Davis et al.
7,124,410	B2	10/2006	Berg	8,109,827	B2	2/2012	Cahill et al.
7,125,336	B2	10/2006	Anttila et al.	8,128,474	B2	3/2012	Amaitis et al.
7,136,871	B2	11/2006	Ozer et al.	8,147,313	B2	4/2012	Amaitis et al.
7,144,011	B2	12/2006	Asher et al.	8,147,373	B2	4/2012	Amaitis et al.
7,169,050	B1	1/2007	Tyler	8,149,530	B1	4/2012	Lockton et al.
7,185,355	B1	2/2007	Ellis	8,155,637	B2	4/2012	Fujisawa
7,187,658	B2	3/2007	Koyanagi	8,162,759	B2	4/2012	Yamaguchi
7,191,447	B1	3/2007	Ellis et al.	8,176,518	B1	5/2012	Junkin et al.
7,192,352	B2	3/2007	Walker et al.	8,186,682	B2	5/2012	Amaitis et al.
				8,204,808	B2	6/2012	Amaitis et al.
				8,219,617	B2	7/2012	Ashida
				8,240,669	B2	8/2012	Asher et al.
				8,246,048	B2	8/2012	Asher et al.

US 11,918,880 B2

Page 4

(56)

References Cited

U.S. PATENT DOCUMENTS

8,267,403 B2	9/2012	Fisher et al.	9,687,739 B2	6/2017	Lockton et al.
8,342,924 B2	1/2013	Leen et al.	9,707,482 B2	7/2017	Lockton et al.
8,342,942 B2	1/2013	Amaitis et al.	9,716,918 B1	7/2017	Lockton et al.
8,353,763 B2	1/2013	Amaitis et al.	9,724,603 B2	8/2017	Lockton et al.
8,376,855 B2	2/2013	Lockton et al.	9,744,453 B2	8/2017	Lockton et al.
8,396,001 B2	3/2013	Jung	9,805,549 B2	10/2017	Asher et al.
8,397,257 B1	3/2013	Barber	9,821,233 B2	11/2017	Lockton et al.
8,465,021 B2	6/2013	Asher et al.	9,878,243 B2	1/2018	Lockton et al.
8,473,393 B2	6/2013	Davie et al.	9,881,337 B2	1/2018	Jaycobs et al.
8,474,819 B2	7/2013	Asher et al.	9,901,820 B2	2/2018	Lockton et al.
8,535,138 B2	9/2013	Amaitis et al.	9,908,053 B2	3/2018	Lockton et al.
8,538,563 B1	9/2013	Barber	9,919,210 B2	3/2018	Lockton
8,543,487 B2	9/2013	Asher et al.	9,919,211 B2	3/2018	Lockton et al.
8,555,313 B2	10/2013	Newman	9,919,221 B2	3/2018	Lockton et al.
8,556,691 B2	10/2013	Leen et al.	9,978,217 B2	5/2018	Lockton
8,585,490 B2	11/2013	Amaitis et al.	9,993,730 B2	6/2018	Lockton et al.
8,597,117 B2	12/2013	Bruce	9,999,834 B2	6/2018	Lockton et al.
8,622,798 B2	1/2014	Lockton et al.	10,052,557 B2	8/2018	Lockton et al.
8,632,392 B2	1/2014	Shore et al.	10,089,815 B2	10/2018	Asher et al.
8,634,943 B2	1/2014	Root	10,096,210 B2	10/2018	Amaitis et al.
8,638,517 B2	1/2014	Lockton et al.	10,137,369 B2	11/2018	Lockton et al.
8,641,511 B2	2/2014	Ginsberg et al.	10,150,031 B2	12/2018	Lockton et al.
8,659,848 B2	2/2014	Lockton et al.	10,165,339 B2	12/2018	Huske et al.
8,672,751 B2	3/2014	Leen et al.	10,186,116 B2	1/2019	Lockton
8,699,168 B2	4/2014	Lockton et al.	10,195,526 B2	2/2019	Lockton et al.
8,705,195 B2	4/2014	Lockton	10,226,698 B1	3/2019	Lockton et al.
8,708,789 B2	4/2014	Asher et al.	10,226,705 B2	3/2019	Lockton et al.
8,717,701 B2	5/2014	Lockton et al.	10,232,270 B2	3/2019	Lockton et al.
8,727,352 B2	5/2014	Amaitis et al.	10,248,290 B2	4/2019	Galfond
8,734,227 B2	5/2014	Leen et al.	10,279,253 B2	5/2019	Lockton
8,737,004 B2	5/2014	Lockton et al.	10,360,767 B2	7/2019	Russell et al.
8,738,694 B2	5/2014	Huske et al.	10,410,474 B2	9/2019	Lockton
8,771,058 B2	7/2014	Alderucci et al.	10,438,451 B2	10/2019	Amaitis
8,780,482 B2	7/2014	Lockton et al.	10,569,175 B2	2/2020	Kosai et al.
8,805,732 B2	8/2014	Davie et al.	10,593,157 B2	3/2020	Simons
8,813,112 B1	8/2014	Cibula et al.	10,653,955 B2	5/2020	Lockton
8,814,664 B2	8/2014	Amaitis et al.	10,695,672 B2	6/2020	Lockton et al.
8,817,408 B2	8/2014	Lockton et al.	10,709,987 B2	7/2020	Lockton et al.
8,837,072 B2	9/2014	Lockton et al.	10,721,543 B2	7/2020	Huske et al.
8,849,225 B1	9/2014	Choti	10,825,294 B2	11/2020	Katz
8,849,255 B2	9/2014	Choti	10,937,279 B1	3/2021	Workman
8,858,313 B1	10/2014	Selfors	10,981,070 B2	4/2021	Isgreen
8,870,639 B2	10/2014	Lockton et al.	11,077,366 B2	8/2021	Lockton
8,935,715 B2	1/2015	Cibula et al.	11,082,746 B2	8/2021	Lockton
9,056,251 B2 *	6/2015	Lockton G07F 17/3276	11,083,965 B2	8/2021	Lockton
9,067,143 B2 *	6/2015	Lockton G07F 17/3295	11,154,775 B2	10/2021	Lockton
9,069,651 B2	6/2015	Barber	11,179,632 B2	11/2021	Lockton
9,076,303 B1	7/2015	Park	11,185,770 B2	11/2021	Lockton
9,098,883 B2	8/2015	Asher et al.	2001/0004609 A1	6/2001	Walker et al.
9,111,417 B2	8/2015	Leen et al.	2001/0005670 A1	6/2001	Lahtinen
9,205,339 B2	12/2015	Cibula et al.	2001/0013067 A1	8/2001	Koyanagi
9,233,293 B2	1/2016	Lockton	2001/0013125 A1	8/2001	Kitsukawa et al.
9,258,601 B2	2/2016	Lockton et al.	2001/0020298 A1	9/2001	Rector, Jr. et al.
9,270,789 B2	2/2016	Huske et al.	2001/0032333 A1	10/2001	Flickinger
9,289,692 B2	3/2016	Barber	2001/0036272 A1	11/2001	Hirayama
9,306,952 B2	4/2016	Burman et al.	2001/0036853 A1	11/2001	Thomas
9,314,686 B2	4/2016	Lockton	2001/0044339 A1	11/2001	Cordero
9,314,701 B2	4/2016	Lockton et al.	2001/0054019 A1	12/2001	de Fabrega
9,355,518 B2	5/2016	Amaitis et al.	2002/0010789 A1	1/2002	Lord
9,406,189 B2	8/2016	Scott et al.	2002/0018477 A1	2/2002	Katz
9,430,901 B2	8/2016	Amaitis et al.	2002/0026321 A1	2/2002	Faris
9,457,272 B2	10/2016	Lockton et al.	2002/0029381 A1	3/2002	Inselberg
9,498,724 B2	11/2016	Lockton et al.	2002/0035609 A1	3/2002	Lessard
9,501,904 B2	11/2016	Lockton	2002/0037766 A1	3/2002	Muniz
9,504,922 B2	11/2016	Lockton et al.	2002/0069265 A1	3/2002	Bountour
9,511,287 B2	12/2016	Lockton et al.	2002/0042293 A1	4/2002	Ubale et al.
9,526,991 B2	12/2016	Lockton et al.	2002/0046099 A1	4/2002	Frengut et al.
9,536,396 B2	1/2017	Amaitis et al.	2002/0054088 A1	5/2002	Tanskanen et al.
9,556,991 B2	1/2017	Furuya	2002/0055385 A1	5/2002	Otsu
9,604,140 B2	3/2017	Lockton et al.	2002/0056089 A1	5/2002	Houston
9,652,937 B2	5/2017	Lockton	2002/0059094 A1	5/2002	Hosea et al.
9,662,576 B2	5/2017	Lockton et al.	2002/0059623 A1	5/2002	Rodriguez et al.
9,662,577 B2	5/2017	Lockton et al.	2002/0069076 A1	6/2002	Faris
9,672,692 B2	6/2017	Lockton	2002/0076084 A1	6/2002	Tian
9,687,738 B2	6/2017	Lockton et al.	2002/0078176 A1	6/2002	Nomura et al.
			2002/0083461 A1	6/2002	Hutcheson
			2002/0091833 A1	7/2002	Grimm
			2002/0094869 A1	7/2002	Harkham
			2002/0095333 A1	7/2002	Jokinen et al.

US 11,918,880 B2

Page 5

(56)

References Cited

U.S. PATENT DOCUMENTS

2002/0097983	A1	7/2002	Wallace et al.	2004/0152454	A1	5/2004	Kauppinen
2002/0099709	A1	7/2002	Wallace	2004/0107138	A1	6/2004	Maggio
2002/0100063	A1	7/2002	Herigstad et al.	2004/0117831	A1	6/2004	Ellis et al.
2002/0103696	A1	8/2002	Huang et al.	2004/0117839	A1	6/2004	Watson et al.
2002/0105535	A1	8/2002	Wallace et al.	2004/0128319	A1	7/2004	Davis et al.
2002/0107073	A1	8/2002	Binney	2004/0139158	A1	7/2004	Datta
2002/0108112	A1	8/2002	Wallace et al.	2004/0139482	A1	7/2004	Hale
2002/0108125	A1	8/2002	Joao	2004/0148638	A1	7/2004	Weisman et al.
2002/0108127	A1	8/2002	Lew et al.	2004/0152517	A1	8/2004	Haedisty
2002/0112249	A1	8/2002	Hendricks et al.	2004/0152519	A1	8/2004	Wang
2002/0115488	A1	8/2002	Berry et al.	2004/0158855	A1	8/2004	Gu et al.
2002/0119821	A1	8/2002	Sen	2004/0162124	A1	8/2004	Barton
2002/0120930	A1	8/2002	Yona	2004/0166873	A1	8/2004	Simic
2002/0124247	A1	9/2002	Houghton	2004/0176162	A1	9/2004	Rothschild
2002/0132614	A1	9/2002	Vanlujit et al.	2004/0178923	A1	9/2004	Kuang
2002/0133817	A1	9/2002	Markel	2004/0183824	A1	9/2004	Benson
2002/0133827	A1	9/2002	Newman et al.	2004/0185881	A1	9/2004	Lee
2002/0142843	A1	10/2002	Roelofs	2004/0190779	A1	9/2004	Sarachik et al.
2002/0144273	A1	10/2002	Reto	2004/0198495	A1	10/2004	Cisneros et al.
2002/0147049	A1	10/2002	Carter, Sr.	2004/0201626	A1	10/2004	Lavoie
2002/0157002	A1	10/2002	Messerges et al.	2004/0203667	A1	10/2004	Shroder
2002/0157005	A1	10/2002	Bunk	2004/0203898	A1	10/2004	Bodin et al.
2002/0159576	A1	10/2002	Adams	2004/0210507	A1	10/2004	Asher et al.
2002/0162031	A1	10/2002	Levin et al.	2004/0215756	A1	10/2004	VanAntwerp
2002/0162117	A1	10/2002	Pearson	2004/0216161	A1	10/2004	Barone, Jr. et al.
2002/0165020	A1	11/2002	Koyama	2004/0216171	A1	10/2004	Barone, Jr. et al.
2002/0165025	A1	11/2002	Kawahara	2004/0224750	A1	11/2004	Ai-Ziyoud
2002/0177483	A1	11/2002	Cannon	2004/0242321	A1	12/2004	Overton
2002/0184624	A1	12/2002	Spencer	2004/0266513	A1	12/2004	Odom
2002/0187825	A1	12/2002	Tracy	2005/0005303	A1	1/2005	Barone, Jr. et al.
2002/0198050	A1	12/2002	Patchen	2005/0021942	A1	1/2005	Diehl et al.
2003/0002638	A1	1/2003	Kaars	2005/0026699	A1	2/2005	Kinzer et al.
2003/0003997	A1	1/2003	Vuong et al.	2005/0028208	A1	2/2005	Ellis
2003/0013528	A1	1/2003	Allibhoy et al.	2005/0043094	A1	2/2005	Nguyen et al.
2003/0023547	A1	1/2003	France	2005/0076371	A1	4/2005	Nakamura
2003/0040363	A1	2/2003	Sandberg	2005/0077997	A1	4/2005	Landram
2003/0054885	A1	3/2003	Pinto et al.	2005/0060219	A1	5/2005	Ditering et al.
2003/0060247	A1	3/2003	Goldberg et al.	2005/0097599	A1	5/2005	Potnick et al.
2003/0066089	A1	4/2003	Anderson	2005/0101309	A1	5/2005	Croome
2003/0069828	A1	4/2003	Blazey et al.	2005/0113164	A1	5/2005	Buecheler et al.
2003/0070174	A1	4/2003	Solomon	2005/0003878	A1	6/2005	Updike
2003/0078924	A1	4/2003	Liechty et al.	2005/0116416	A1	6/2005	Peterson
2003/0086691	A1	5/2003	Yu	2005/0131984	A1	6/2005	Hofmann et al.
2003/0087652	A1	5/2003	Simon et al.	2005/0138668	A1	6/2005	Gray et al.
2003/0088648	A1	5/2003	Bellaton	2005/0144102	A1	6/2005	Johnson
2003/0088878	A1	5/2003	Rogers	2005/0155083	A1	7/2005	Oh
2003/0114224	A1	6/2003	Anttila et al.	2005/0177861	A1	8/2005	Ma et al.
2003/0115152	A1	6/2003	Flaherty	2005/0210526	A1	9/2005	Levy et al.
2003/0125109	A1	7/2003	Green	2005/0216838	A1	9/2005	Graham
2003/0134678	A1	7/2003	Tanaka	2005/0235043	A1	10/2005	Teodosiu et al.
2003/0144017	A1	7/2003	Inselberg	2005/0239551	A1	10/2005	Griswold
2003/0154242	A1	8/2003	Hayes et al.	2005/0255901	A1	11/2005	Kreutzer
2003/0165241	A1	9/2003	Fransdonk	2005/0256895	A1	11/2005	Dussault
2003/0177167	A1	9/2003	Lafage et al.	2005/0266869	A1	12/2005	Jung
2003/0177504	A1	9/2003	Paulo et al.	2005/0267969	A1	12/2005	Poikselka et al.
2003/0189668	A1	10/2003	Newman et al.	2005/0273804	A1	12/2005	Preisman
2003/0195023	A1	10/2003	Di Cesare	2005/0283800	A1	12/2005	Ellis et al.
2003/0195807	A1	10/2003	Maggio	2005/0288080	A1	12/2005	Lockton et al.
2003/0208579	A1	11/2003	Brady et al.	2005/0288101	A1	12/2005	Lockton et al.
2003/0211856	A1	11/2003	Zilliacus	2005/0288812	A1	12/2005	Cheng
2003/0212691	A1	11/2003	Kuntala et al.	2006/0020700	A1	1/2006	Qiu
2003/0216185	A1	11/2003	Varley	2006/0025070	A1	2/2006	Kim et al.
2003/0216857	A1	11/2003	Feldman et al.	2006/0046810	A1	3/2006	Tabata
2003/0228866	A1	12/2003	Pezeshki	2006/0047772	A1	3/2006	Crutcher
2003/0233425	A1	12/2003	Lyons et al.	2006/0053390	A1	3/2006	Garipey-Viles
2004/0005919	A1	1/2004	Walker et al.	2006/0058103	A1	3/2006	Danieli
2004/0014524	A1	1/2004	Pearlman	2006/0059161	A1	3/2006	Millett et al.
2004/0015442	A1	1/2004	Hmlinen	2006/0063590	A1	3/2006	Abassi et al.
2004/0022366	A1	2/2004	Ferguson et al.	2006/0082068	A1	4/2006	Patchen
2004/0025190	A1	2/2004	McCalla	2006/0087585	A1	4/2006	Seo
2004/0056897	A1	3/2004	Ueda	2006/0089199	A1	4/2006	Jordan et al.
2004/0060063	A1	3/2004	Russ et al.	2006/0094409	A1	5/2006	Inselberg
2004/0073915	A1	4/2004	Dureau	2006/0101492	A1	5/2006	Lowcock
2004/0088729	A1	5/2004	Petrovic et al.	2006/0111168	A1	5/2006	Nguyen
2004/0093302	A1	5/2004	Baker et al.	2006/0135253	A1	6/2006	George et al.
				2006/0148569	A1	7/2006	Beck
				2006/0156371	A1	7/2006	Maetz et al.
				2006/0160597	A1	7/2006	Wright
				2006/0174307	A1	8/2006	Hwang et al.

US 11,918,880 B2

Page 6

(56)	References Cited				2010/0137057	A1	6/2010	Fleming
	U.S. PATENT DOCUMENTS				2010/0203936	A1	8/2010	Levy
					2010/0261533	A1	10/2010	Kryger
					2010/0279764	A1	11/2010	Allen et al.
2006/0183547	A1	8/2006	McMonigle		2010/0296511	A1	11/2010	Prodan
2006/0183548	A1	8/2006	Morris et al.		2011/0016224	A1	1/2011	Riley
2006/0190654	A1	8/2006	Joy		2011/0053681	A1	3/2011	Goldman
2006/0205483	A1 *	9/2006	Meyer	G06Q 20/06 463/25	2011/0065490	A1	3/2011	Lutnick
					2011/0081958	A1	4/2011	Herman
2006/0205509	A1	9/2006	Hirota		2011/0116461	A1	5/2011	Holt
2006/0205510	A1	9/2006	Lauper		2011/0124397	A1	5/2011	Gingher
2006/0217198	A1	9/2006	Scott		2011/0130197	A1	6/2011	Bythar et al.
2006/0236352	A1	10/2006	Johnson		2011/0227287	A1	9/2011	Reabe
2006/0248553	A1	11/2006	Mikkelsen et al.		2011/0269548	A1	11/2011	Barclay et al.
2006/0248564	A1	11/2006	Zinevitch		2011/0306428	A1	12/2011	Lockton et al.
2006/0256865	A1	11/2006	Westerman		2012/0058808	A1	3/2012	Lockton
2006/0256868	A1	11/2006	Westerman		2012/0115585	A1	5/2012	Goldman
2006/0269120	A1	11/2006	Mehmadi et al.		2012/0157178	A1	6/2012	Lockton
2006/0285586	A1	12/2006	Westerman		2012/0264496	A1	10/2012	Behrman et al.
2007/0004516	A1	1/2007	Jordan et al.		2012/0282995	A1	11/2012	Allen et al.
2007/0013547	A1	1/2007	Boaz		2012/0295686	A1	11/2012	Lockton
2007/0019826	A1	1/2007	Horbach et al.		2013/0005453	A1	1/2013	Nguyen et al.
2007/0028272	A1	2/2007	Lockton		2013/0072271	A1	3/2013	Lockton et al.
2007/0037623	A1	2/2007	Romik		2013/0079081	A1	3/2013	Lockton et al.
2007/0054695	A1	3/2007	Huske et al.		2013/0079092	A1	3/2013	Lockton et al.
2007/0078009	A1	4/2007	Lockton et al.		2013/0079093	A1	3/2013	Lockton et al.
2007/0083920	A1	4/2007	Mizoguchi et al.		2013/0079135	A1	3/2013	Lockton et al.
2007/0086465	A1	4/2007	Paila et al.		2013/0079150	A1	3/2013	Lockton et al.
2007/0087832	A1	4/2007	Abbott		2013/0079151	A1	3/2013	Lockton et al.
2007/0093296	A1	4/2007	Asher		2013/0196774	A1	8/2013	Lockton et al.
2007/0106721	A1	5/2007	Schloter		2013/0225285	A1	8/2013	Lockton
2007/0107010	A1	5/2007	Jolna et al.		2013/0225299	A1	8/2013	Lockton
2007/0129144	A1	6/2007	Katz		2014/0031134	A1	1/2014	Lockton et al.
2007/0147870	A1	7/2007	Nagashima et al.		2014/0100011	A1	4/2014	Gingher
2007/0162328	A1	7/2007	Reich		2014/0106832	A1	4/2014	Lockton et al.
2007/0183744	A1	8/2007	Koizumi		2014/0128139	A1	5/2014	Shuster et al.
2007/0197247	A1	8/2007	Inselberg		2014/0155130	A1	6/2014	Lockton et al.
2007/0210908	A1	9/2007	Putterman et al.		2014/0155134	A1	6/2014	Lockton
2007/0219856	A1	9/2007	Ahmad-Taylor		2014/0206446	A1	7/2014	Lockton et al.
2007/0222652	A1	9/2007	Cattone et al.		2014/0237025	A1	8/2014	Huske et al.
2007/0226062	A1	9/2007	Hughes et al.		2014/0248952	A1	9/2014	Cibula et al.
2007/0238525	A1	10/2007	Suomela		2014/0256432	A1	9/2014	Lockton et al.
2007/0243936	A1 *	10/2007	Binenstock	G06Q 10/10 463/42	2014/0279439	A1	9/2014	Brown
					2014/0287832	A1	9/2014	Lockton et al.
2007/0244570	A1	10/2007	Speiser et al.		2014/0309001	A1	10/2014	Root
2007/0244585	A1	10/2007	Speiser et al.		2014/0335961	A1	11/2014	Lockton et al.
2007/0244749	A1	10/2007	Speiser et al.		2014/0335962	A1	11/2014	Lockton et al.
2007/0265089	A1	11/2007	Robarts		2014/0378212	A1	12/2014	Sims
2007/0294410	A1	12/2007	Pandya		2015/0011310	A1	1/2015	Lockton et al.
2008/0005037	A1	1/2008	Hammad		2015/0024814	A1	1/2015	Root
2008/0013927	A1	1/2008	Kelly et al.		2015/0067732	A1	3/2015	Howe et al.
2008/0051201	A1	2/2008	Lore		2015/0148130	A1	5/2015	Cibula et al.
2008/0066129	A1	3/2008	Katcher et al.		2015/0238839	A1	8/2015	Lockton
2008/0076497	A1	3/2008	Kiskis et al.		2015/0238873	A1	8/2015	Arnone et al.
2008/0104630	A1	5/2008	Bruce		2015/0258452	A1	9/2015	Lockton et al.
2008/0146337	A1	6/2008	Halonon		2015/0356831	A1	12/2015	Osibodu
2008/0169605	A1	7/2008	Shuster et al.		2016/0023116	A1	1/2016	Wire
2008/0222672	A1	9/2008	Piesing		2016/0045824	A1	2/2016	Lockton et al.
2008/0240681	A1	10/2008	Fukushima		2016/0049049	A1	2/2016	Lockton
2008/0248865	A1	10/2008	Tedesco		2016/0054872	A1	2/2016	Cibula et al.
2008/0270288	A1	10/2008	Butterly et al.		2016/0082357	A1	3/2016	Lockton
2008/0288600	A1	11/2008	Clark		2016/0121208	A1	5/2016	Lockton et al.
2008/0301741	A1	12/2008	Stern		2016/0134947	A1	5/2016	Huske et al.
2008/0315521	A1	12/2008	Reabe, Jr.		2016/0217653	A1	7/2016	Meyer
2009/0011781	A1	1/2009	Merrill et al.		2016/0220908	A1	8/2016	Isgreen
2009/0094632	A1	4/2009	Newman et al.		2016/0271501	A1	9/2016	Balsbaugh
2009/0103892	A1	4/2009	Hirayama		2016/0361647	A1	12/2016	Lockton et al.
2009/0119151	A1	5/2009	de Heer		2016/0375362	A1	12/2016	Lockton et al.
2009/0186676	A1	7/2009	Amaitis et al.		2017/0036110	A1	2/2017	Lockton et al.
2009/0163271	A1	9/2009	George et al.		2017/0036117	A1	2/2017	Lockton et al.
2009/0228351	A1	9/2009	Rijnsenbrij		2017/0043259	A1	2/2017	Lockton et al.
2009/0234674	A1	9/2009	Wurster		2017/0053498	A1	2/2017	Lockton
2009/0264188	A1	10/2009	Soukup		2017/0065891	A1	3/2017	Lockton et al.
2009/0271512	A1	10/2009	Jorgensen		2017/0098348	A1	4/2017	Odum
2009/0325716	A1	12/2009	Harari		2017/0103615	A1	4/2017	Theodosopoulos
2010/0099421	A1	4/2010	Patel et al.		2017/0128840	A1	5/2017	Croci
2010/0099471	A1	4/2010	Feeney et al.		2017/0221314	A1	8/2017	Lockton
2010/0107194	A1	4/2010	McKissick et al.		2017/0225071	A1	8/2017	Lockton et al.
2010/0120503	A1	5/2010	Hoffman et al.		2017/0225072	A1	8/2017	Lockton et al.

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(56)

References Cited

U.S. PATENT DOCUMENTS

2017/0232340	A1	8/2017	Lockton
2017/0243438	A1	8/2017	Merati
2017/0249801	A1	8/2017	Malek
2017/0252649	A1	9/2017	Lockton et al.
2017/0259173	A1	9/2017	Lockton et al.
2017/0264961	A1	9/2017	Lockton
2017/0282067	A1	10/2017	Lockton et al.
2017/0296916	A1	10/2017	Lockton et al.
2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0001213	A1	1/2018	Tsang
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov
2019/0295382	A1	9/2019	Huke
2019/0304259	A1	10/2019	Joao
2020/0111325	A1	4/2020	Lockton
2021/0043036	A1	2/2021	Katz
2021/0099759	A1	4/2021	Armstrong
2021/0136456	A1	5/2021	Srinivasan
2021/0142620	A1	5/2021	Platis
2021/0260476	A1	8/2021	Lockton

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102	A3 6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999
JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01039506	A2 5/2001
WO	01/65743	A1 9/2001
WO	02/03698	A1 10/2002
WO	2005064506	A1 7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007

WO	2007016575	2/2007
WO	2007041667	4/2007
WO	2008027811	A2 3/2008
WO	2008115858	A1 9/2008

OTHER PUBLICATIONS

Gambling Commission, "Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcommission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.

Sipko et al., "Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from <http://www.winviewgames.com/press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.

The International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasy sport-Wikipedia.pdf, https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969 (Year 2015).

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

'Ark 4.0 Standard Edition, Technical Overview' www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games by Tristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6.html.

"On the Performance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1>.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

<http://help.yahoo.com/help/us/tourn/tourn-03.html>.

* cited by examiner

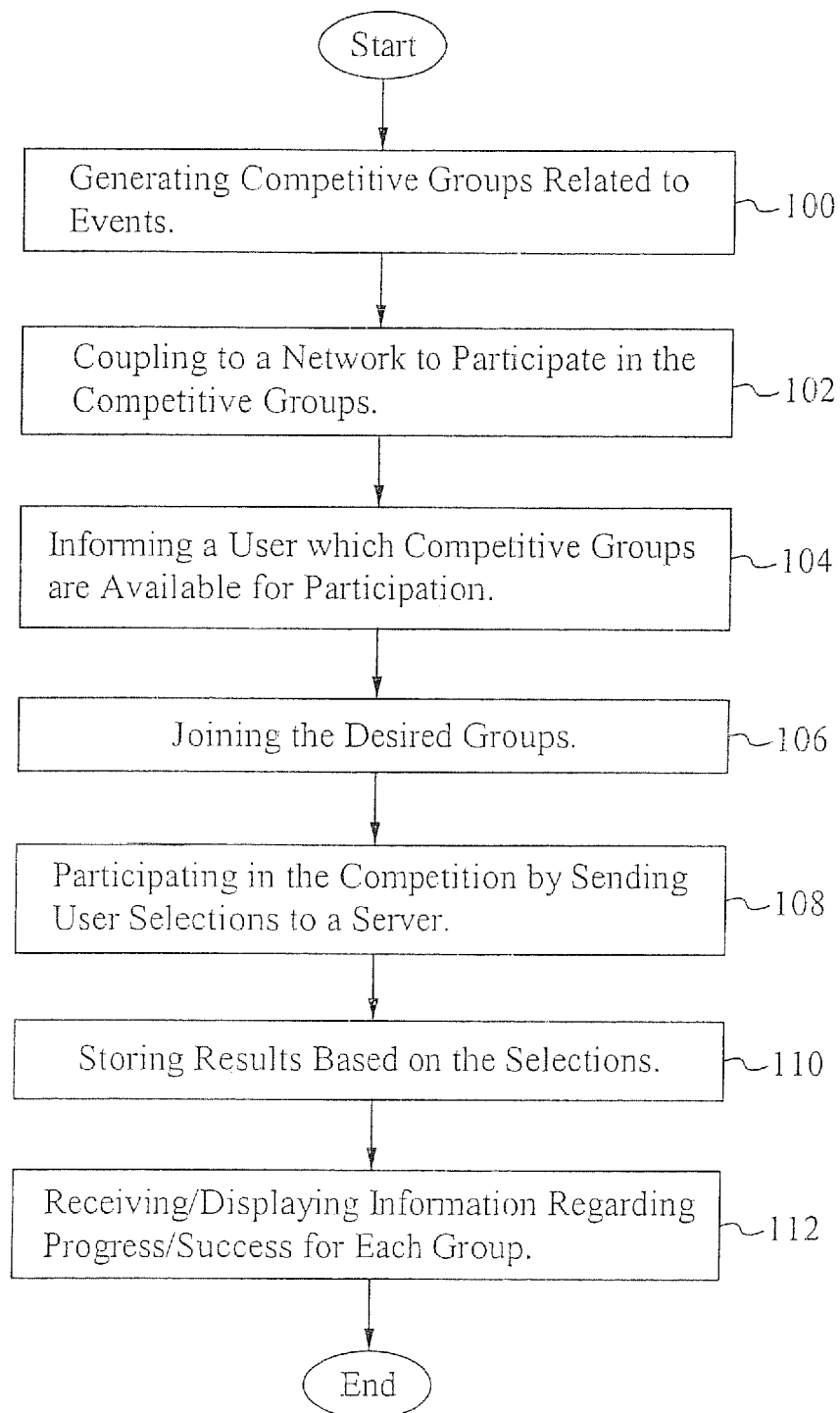


Fig. 1

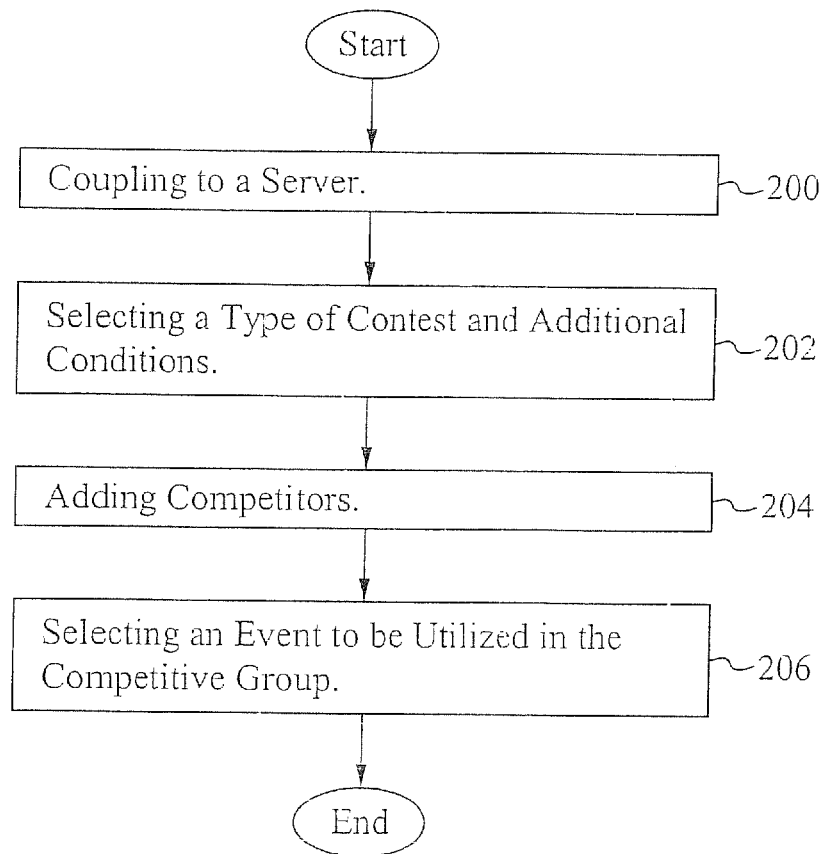


Fig. 2

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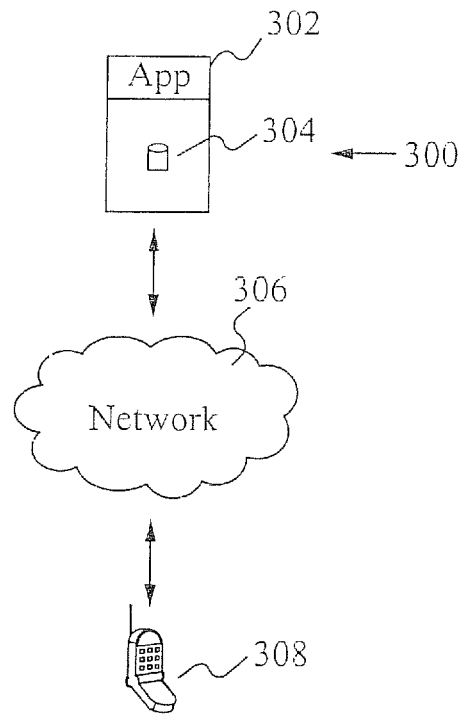


Fig. 3

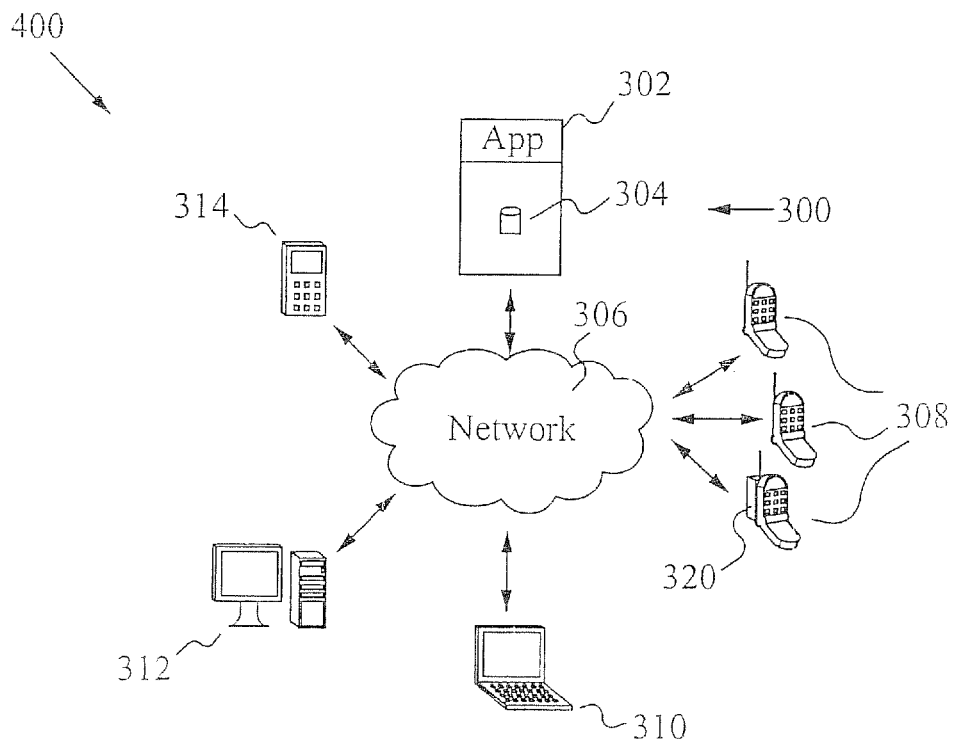


Fig. 4

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**METHOD OF AND SYSTEM FOR
CONDUCTING MULTIPLE CONTESTS OF
SKILL WITH A SINGLE PERFORMANCE**

RELATED APPLICATION(S)

This Patent Application is a continuation of co-pending U.S. patent application Ser. No. 16/942,553 filed on Jul. 29, 2020, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 16/517,330, filed on Jul. 19, 2019, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 15/956,619, filed on Apr. 18, 2018, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 15/297,040, filed on Oct. 18, 2016, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/956,217, filed on Dec. 1, 2015, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 13/859,554, filed on Apr. 9, 2013, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 13/246,464, filed on Sep. 27, 2011, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation-in-part of co-pending U.S. patent application Ser. No. 13/215,052, filed Aug. 22, 2011, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 11/652,240, filed on Jan. 10, 2007, now U.S. Pat. No. 8,002,618, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/757,960, filed Jan. 10, 2006, and entitled "METHODOLOGY FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE," all of which are also hereby incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. In addition, games of skill with a

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common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

SUMMARY OF THE INVENTION

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of the availability of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated for each competition group, so that users continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

In one aspect, a method of participating in multiple contests of skill corresponding to an event programmed in a device. The method comprises receiving a list of competitive groups to join, selecting a plurality of competitive groups to join, participating with the plurality of competitive groups

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by sending selections related to the event to a server and receiving standings on a device from the server, wherein the standings are based on results from the selections. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show, and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. Receiving the standings on the device occurs during participating with the plurality of competitive groups. The standings are separated based on the plurality of competitive groups. The standings are received periodically and represent relative performance in the separate competitive groups. The competitive groups are selected from the group consisting of service provider generated competitive groups and user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The user generated competitive groups includes contacts on a social networking site. The list of competitive groups to join is received on the device selected from the group consisting of a cellular phone, a laptop computer, a personal computer, PDA and a tablet computer. The competitive groups are maintained in a database. In some embodiments, the results are adjusted using a handicap by providing additional points to users in lower level groups. In some embodiments, the method is implemented using HTML5 or a native application.

In another aspect, a method of conducting multiple contests of skill corresponding to an event programmed in a device. The method comprises generating separate competitive groups related to the event, coupling to a network to participate in the competitive groups, informing a user which of the competitive groups are available for the user to join, joining a selected number of the competitive groups, participating with the competitive groups by sending selections related to the event to a server within the network, storing results and standings on the server, wherein the standings are based on the results and the results are based on the selections and transmitting the standings to a device. A user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group. The method further comprises displaying the standings on the device. The server contains an application and a database for assisting in generating the competitive group. The application includes a graphical user interface. The device contains an application for assisting in generating the competitive group. Generating competitive groups related to the event further comprises coupling to the server, selecting a type of contest and additional conditions to be included in the competitive group, adding competitors to the competitive group and selecting the event for competition by the competitive group. The type of contest is selected from the group consisting of an open contest, a head-to-head contest and a team contest. Adding competitors to the competitive group includes identifying the competitors by an identifier selected from the group consisting of a username, an email address, a cellular phone number and a personal identifier. The method further comprises sending an invitation which informs the competitors of an opportunity to be included in the competitive group. The invitation is sent by a mechanism selected from the group consisting of an email, an SMS text message and a voice message. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event

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comprises card, dice, trivia and word games played simultaneously. Transmitting the standings occurs during participating with the competitive groups. The standings are separated based on the competitive groups. The standings are received periodically and represent performance within the competitive groups. The competitive groups are selected from the group consisting of service provider generated competitive groups and user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The user generated competitive groups include contacts on a social networking site. The device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer, PDA and a tablet computer. The competitive groups are maintained in a database. The results are adjusted using a handicap by providing additional points to users in lower level groups. In some embodiments, the method is implemented using HTML5 or a native application.

In another aspect, a server device for conducting multiple contests of skill corresponding to an event comprises a storage mechanism and an application for interacting with the storage mechanism to generate and store competitive groups which are used to compete in the multiple contests of skill, the application further for receiving selections related to the event, storing results and standings based on the selections, wherein the standings are based on the results and transmitting the standings to the device. The application is further for providing an interface for generating competitive groups related to the event. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. The server device communicates data for generating the competitive groups, for selecting the competitive groups to join and for submitting the selections. The standings are transmitted periodically to the device and represent performance within the competitive groups. The standings are separated based on the competitive groups. A network identifies the competitive groups a user is eligible for. The server device further comprises a database stored on the server device for managing the selections, the results, the standings and the competitive groups. The results are adjusted using a handicap by providing additional points to users in lower level groups.

In yet another aspect, a device for participating in multiple contests of skill corresponding to an event comprises a communications module for coupling to a server and an application for utilizing the communications module for coupling to a server to communicate with the server to generate competitive groups which are used to compete in the multiple contests of skill. The application utilizes the communications module for coupling to the server to send selections to and receive standings from the server. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. The competitive groups comprise user generated competitive groups including contacts on a social networking site. In some embodiments, the device and the server implement HTML5.

In another aspect, a method programmed in a memory of a device comprises generating a list of competitive groups to join and presenting the list of competitive groups to join, wherein the list of competitive groups are for participating in multiple contests of skill corresponding to an event. Users

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are provided a currency for watching the event or participating in the multiple contests of skill. The currency is redeemable for prizes or services. Each group pools the currency received by users and the currency is distributed to a member of each group. The member is chosen at random. The member is chosen based on skill. Participants in a group of the competitive groups pool sweepstakes entries together and divide a resulting award from the sweepstakes among the participants of the group. A game of skill is synchronized with the event. The game of skill is synchronized with the event using watermarking or fingerprinting. The multiple contests of skill are generated by users using a template. Promotional awards are awarded for participating. Frequent player points are offered for participating. Users are able to invite other user to a contest of the multiple contests of skill through a social networking site. A user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of a process of utilizing the present invention.

FIG. 2 illustrates a flowchart of a process of generating a user generated competition group.

FIG. 3 illustrates a graphical representation of an embodiment of the present invention.

FIG. 4 illustrates a graphical representation of a network of devices.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A method and system for conducting a variety of competitions simultaneously are described herein. The organization of competition in a game of skill has previously taken one of three basic formats:

- 1) Open contests: where large numbers of players enter an event, and all of the entrants are competing against each other for a single prize pool.
- 2) Head-to-head: where competitors are matched between a relatively small number of players identified to compete head-to-head against each other. The actual match making occurs in many forms, such as match play or elimination tournaments.
- 3) Team competitions: where two or more people are teamed to compete in head-to-head elimination against other similar sized teams in match play or total score competitions.

The present invention is a system and method allowing participants to simultaneously compete in multiple contests based on a single performance. For example, a user is able to participate in an open contest, compete in a team competition, and also compete against a small group of friends all utilizing a score achieved in the same event.

As a comparison, in tournaments held for bowling or golf, players are able to compete simultaneously in a gross score tournament as well as a net (handicap) tournament with the same performance. However, the contestants in the gross and net competitions are identical. The focus of the present invention is on enabling the entry of an individual in separate competitions, with separate prizes based on their single performance (score), where the pool of entrants is different for each competition.

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The default mechanism for organizing a competition for this type of game in the past has been an open contest where all competitors are automatically entered in a contest against all other players. As taught in U.S. Pat. No. 5,813,913, incorporated herein by reference, the competitive field of players is also able to be divided into separate flights or groups according to skill and experience and only scores from other competitions at the same skill level are compared. Thousands of players are able to compete in a particular football game within a particular skill level. In some embodiments, game data includes a lockout signal to prevent improper game inputs by participants. For example, a central computer system broadcasts a lockout signal to prevent improper game inputs by participants.

For this example, Player A has been rated as an "intermediate" player and is competing against 10,000 other "intermediate" players in an interactive game of skill played with a live Monday Night Football broadcast. Prior to the telecast, Player A has arranged a side competition against four of his friends. Player B has organized through a match-making interface, a small competition which includes Players A, B, C, D and E. In this example, Players A and B are intermediate players, but Players C, D and E are novice players. Player B has also organized this small competition to require a \$2.00 entry fee with a winner-takes-all rule. While none of the competitions require prizes or awards, they are allowable in games of skill.

When Player A logs on to a network supporting mobile games of skill, he is presented with the option of competing in the private separate contest that Player B set up. Player A agrees to compete with the \$2.00 entry fee.

Separately, Player A has previously registered to participate in a sponsored season long team competition with coworkers F, G and H. The highest two scores of their four man team are totaled, and these points are added to the season's cumulative score with the highest team scores winning prizes. Thus, for a single football game, Player A is registered in: an open competition where the best competitors win prizes, a friendly competition for a prize pool of \$10, and a season long team competition.

During the football game, Player A, like all of the other players, tries to get the best possible score by predicting the plays correctly before they happen. He plays in the same manner he would playing in the open contest alone, but his performance is in fact simultaneously separately scored in these completely different competitions against a different set of opponents for different rewards.

At the end of the event, Player A scored 12,565 points, in this example. That score was in the 92nd percentile among the 10,000 intermediate players, but not high enough to win an award in that contest. That same score of 12,565 was also compared against Players B, C, D and E, and was the highest score, so Player A won the separate competition of \$10. At the same time, Player A's score was the second highest among his team members in the separate team competition, and therefore was one which was totaled for the season long team competition.

It is essential to the success and enjoyment of such an invention that a potential competitor have an easy method of registering and entering these separate competitions on an ad hoc or seasonal basis. In addition, it is important to the success of such a system that all of the competitors be able to monitor periodically, not only their ongoing standings in the overall open competition at their skill level, but they will be able to periodically review all the competitions they are entered into to see the current standings.

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For each of these competitions, there are two ways the group of attendees are able to be formed: A) organized by the service provider and/or a commercial sponsor or B) organized by the users themselves. Examples of service provider generated groups include those based on competitive skill level and region. For example, all intermediate players for a specific football game. An example of a user generated group is identifying five friends for a football competition. As each player enters a particular event (e.g. Monday Night Football), they are informed of the competitions they are playing in (e.g. Intermediate Global competition, the California Bay Area competition, and the personal Group competition). Each group is able to have a generic name and/or a specific name such as "personal group competition 1" or "Bob's Competition." When a player's phone or computing device establishes a connection with the network (e.g. the Airplay Network), the network identifies all of the groups that this player is able to compete in, and the server will upload this information to the phone over a cellular connection for display to the user. When a user couples to the network with a computing device other than a cellular phone, the information is available through the Internet. In some embodiments, participation in various group competitions involves additional fees. Users have the ability to choose not to compete in any or all of the groups they have been invited to.

There are two classes of Groups: System Generated Groups (e.g. Service Provider Groups) and User Generated Groups. System Generated Groups are generated by the service administrator based on database information about the user. Examples include Intermediate Skill Level and California Bay Area San Francisco 49ers Fans. User Generated Groups are defined by one or more members. A member is able to generate a group either from the services website or from a cellular phone interface. To generate a group, a member generates a name for the group or a generic name is assigned, and then the member adds other members to the group. The member is able to add other members to the group by their handle (unique identifier), email address (for new members) or by their cellular phone number. Groups are able to be assigned to a particular event. A group is able to be designated as an active group or a party. User group owners generate a party by associating the group to a particular event (e.g. December 12th Monday Night Football Game). In some embodiments, an email invitation or text message is sent to inform the members of the group that they have been invited to a party. In some embodiments, users are able to generate a group by joining together "friends" on social network sites such as Facebook, Twitter, Google+ or any other site. For example, a user is able to select "all Facebook contacts" to invite to join a group.

The game control server maintains a list of groups. Service Provider Groups are automatically assigned to events. User Groups are assigned to events by the group owners. In both cases, a list of active groups is known before the start of the event such as parties for a particular event. Within each of these known groups a list of all the participants is also maintained. This is able to be implemented in several ways. The most common way is via a database manager. This is able to be done through a data structure that is loaded for each event, and a database is one natural implementation to keep track of the group/participant relationships.

Throughout the game, a server manages the scores for every player. The scores are updated in a central location

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such as a database server, and are sorted with the members of a particular group to identify the rankings for each member in the competition.

During an event, scores and rankings are sent to members of the various groups. This is done after each scoring opportunity, or at a slower pace such as every five minutes or every five scoring opportunities. For small groups (e.g. 20 or less active participants) all of the scores and rankings are able to be sent by the server and displayed on the participant's device. For very large groups there are two approaches that can be taken: 1) Common message or 2) Individualized message. Sending a common message for large groups is much more efficient on the network, and is able to still provide a significant amount of information. The message is able to contain the top 20 names and scores for this group as well as the score that is required to be in the top 95%, 90%, 85%, . . . 5%. When the client receives this message, it determines what percentile the user is in by extrapolating its score between the percentile scores that the user is between. In sending an individual message for a large group, the server would still send the top 20 names and scores as well as the exact percentile that this user falls in.

Each separate tournament is managed effectively. A message is sent from the game server to the individual clients associated with each group. For very large groups, this message is able to be identical for all of those that are receiving the message. Past results tracked on the cell phone and in more detail on the website will track the rankings in each of the different groups associated with an event. A selection of pre-produced audio and visual comments, for example, in the nature of taunts and cheers are able to be selected from a menu and sent to a specific individual or to all competitors in the group.

Games of skill played on the Internet or cellular phones based upon live telecast sporting events, popular game shows or commercials contained within the broadcast are expected to attract a large number of potential competitors. As in all games of skill, there will be a wide variety of experience and talent and many motivations to play. To some, the enjoyment will be competing in open competitions against skilled players to test their medal. For others, it may be just the ability to compete and possibly win against a handful of close friends who share the same passion for the underlying televised event. Others may be more team oriented and derive more enjoyment from participating as a member of the group. The method and systems described herein provide not only the ability for an individual to find a group of competitors and a contest attractive to them, but also allows them to compete in multiple contests simultaneously with the identical performance and with the same investment of time. This increases not only the sense of community, but provides greater opportunities for the satisfaction of beating friends as well as winning prizes.

FIG. 1 illustrates a flowchart of a process of utilizing the present invention. In the step 100, competitive groups are generated related to events. The competitive groups are either system generated or user generated. As described above, a system generated group is generally based on skill level, location or another generic attribute that some users qualify for, while other users do not. A user generated group is selected by a user where participants are added to the group by entering a username, email address, cellular phone number, or another distinguishing identifier. User generated groups typically include groups of friends, co-workers and other groups of people that a user wants to compete with. Any number of system groups and user groups are able to be generated. In addition to determining who is included in the

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competition, the events being played within the competition are selected. For example, a user is able to set up a Monday Night Football league, wherein every Monday night for the regular season of the NFL, the users within the group compete based on the Monday night game. In some embodiments, the specific games that the users compete in are selected at later dates beyond the initial generation of the group.

In the step **102**, users couple to a network (e.g. a social network such as GetGlu, Miso or a network game) to participate in the generated competitions. In the step **104**, the users are informed which competitions are available for participation. For example, an intermediate user couples to the network using his cellular phone and is greeted with a list of competitions available for him to join. The list includes, a free open competition for all intermediate players for a specified game, an individual group competition that his friend invited him to join also for the same specified game, a team competition that his co-workers wanted him to be a part of where it is a season long tournament which includes the same specified game and another system generated competition also for the same game that costs \$10 to enter with larger prizes available than the free competition. In the step **106**, each user who has coupled to the network joins the groups desired. Continuing with the example above, the user decides to join the free open competition, the friend's competition and the co-worker competition but does not join the \$10 competition.

In the step **108**, the users then participate in the competitions by sending user selections (e.g. predictions) to a server within the network for monitoring, analyzing and determining results based on the selections. Based on the results, standings for each competition are also determined. Using the example above again, although the user joined three different competitions related to a single game, the user competes exactly the same as if he entered in only one of the competitions, since his input is distributed for the three different competitions.

In the step **110**, the results based on the users' selections are stored. The results are stored in a way such that they are easily retrieved for each competition. For example, a storing mechanism such as a database stores the results of Game X for Player A where Player A's score is 1000. In the free open competition, Player A's score was not good enough to win a prize. However, in the friendly competition, it was the highest score, and in the co-worker team competition it was a score usable by the team. Therefore, although the score was not a winning score for one competition, it was a beneficial score in the other two competitions. By competing in multiple competitions for the same game/event, a user's results/score could provide different outcomes depending on the competition. Therefore, the proper associations of each competition and the score are required.

In the step **112**, each user receives the results and/or standings on his cellular phone or computer. The results and/or standings arrive at varying times depending on the setup of the system. The results and/or standings are received or at least accessible after the competition ends. If desired, the results and/or standings are also received throughout the competition such as every five minutes or after a certain number of selections are made. The standings from the results determine who wins at the end of the competition. While displayed during the game, the standings show what position the user is in. The standings are based on the results of the selections made by the users.

FIG. 2 illustrates a flowchart of a process of generating a user generated competition group. In the step **200**, a user

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couples to a server within a network (e.g. the Airplay Network) storing an application to generate a competition group. In some embodiments, the application is stored on the user's cellular phone instead of or in addition to on the server and is able to utilize HTML5 or use native applications on the user's cellular phone such as Java and Flash, or HTML5. Using HTML5, the processing is performed on the server, and HTML5 allows the browser on the mobile device to appear as an application even though it is a web page. Preferably, the application provides a graphical user interface such as an interactive website for easily generating the competition group. In the step **202**, the user selects the type of competition, such as open, head-to-head or team, in addition to other types of competitions. The user also adds any additional requirements or conditions such as intermediate players only or \$2 entry fee with the winner-take-all. Additionally, the user labels or names the competition group. In the step **204**, competitors are added to the competition. The competitors are added based on a username, phone number, email address or another identification mechanism. In the step **206**, either at the initial set up of the competition group or later on, one or more events are selected to be competed in. For example, if a user wants to set up a competition specifically for Super Bowl XLI, he is able to designate that immediately. Or if a user wants to start a week-long competition related to Jeopardy, he is able to do that as well. The user is also able to retain the same group and modify it to generate a second competition. For example, after the Super Bowl XLI competition ends, the user is able to generate another competition with the same group for the NCAA BCS Bowl Championship Game. Users are able to generate as basic or as complex a competition group as desired. As described above, it is able to be for a single event, a variety of events or an entire season of events. Preferably, a database is utilized to organize the competition groups for easy correlation of data.

FIG. 3 illustrates a graphical representation of an embodiment of the present invention. A server **300** contains an application **302** and a storage mechanism **304**. The application **302** is preferably a web application or at least has a web component to enable users to interact with a web graphical user interface to input data and review data. The storage mechanism **304** is utilized for storing selections and results from the selections as well as competition groups. The storage mechanism **304** preferably includes a database for organizing the data including the selections, results, standings and competition groups amongst other data needed for executing the competitions. The server **300** is part of a network **306**. A device **308** couples to the server **300** through the network **306**. In some embodiments the network **306** includes the Internet. In some embodiments, the network **306** includes a cellular network. Also, in some embodiments, the network **306** includes both the Internet and a cellular network. The device **308** is selected from a cellular phone, a PDA, a computer, a laptop, a smart phone (e.g. an iPhone®), a tablet (e.g. an iPad®), or any other device capable of communicating with the server **300**. As described above, in some embodiments, an application for allowing users to generate competition groups, input selections and communicate with the server in general is included in the device **308** instead of or in addition to the application **302** on the server **300**.

FIG. 4 illustrates a graphical representation of a network of devices. As described above, the server **300** contains the application **302** and the storage mechanism **304** for inputting and outputting data related to the competitions. The device **308**, couples to the network through a network **306**. As

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described above, the network includes either the Internet, a cellular network or both. Although the device 308 is able to be a device other than a cellular phone as shown, other devices are also shown coupled to the network 306 therefore forming a network of devices 400. The other devices include a laptop 310, a computer 312 and a PDA 314. One of the devices 308 is shown with an application 320 for enabling the user to generate competition groups and communicate with the server 300.

In some embodiments, handicaps are implemented so that users of different levels are able to compete more fairly. Handicaps provide additional points to users at lower levels so their score is comparable to a more advanced user. The handicaps are determined based on analysis of the scoring. For example, if advanced users on average score 3000, while intermediate users on average score 2000 and beginners on average score 1000 for the same set of questions, then a fair handicap is 1000 per difference in level. Thus, when there is a friendly competition between one user who is advanced by playing every week and three beginner users who play once a month just for fun, a straight game without handicaps is not likely going to be a close competition. However, if the beginner users are given help to put them on par with the advanced user, then the outcome of the competition could result in a beginner user winning.

In some embodiments, each user competes in the same game, but slightly different sets of questions/choices are posed based on the competition level. For example, an intermediate user chooses to play in an open intermediate competition and also with a group of beginner friends. Each of the beginner users is asked to choose what type of play the following play is going to be (e.g. Run or Pass). The intermediate user is also asked to choose the following play. However, the intermediate user is also asked to choose which direction the play will go (e.g. Left or Right). Therefore, the same game is being played to some extent, but there is a slight modification, so that more advanced users have additional options. However, when scoring, the additional options apply only across the same level. Thus, the user selecting Left or Right correctly has no effect on the scoring in the beginner competition. It only affects scoring for the intermediate competition. Thus, users are able to compete at different levels for the same event.

In some embodiments, interactive advertising is used in games of chance and/or skill, sweepstakes, promotional awards, offering frequent player points. For example, a game of skill is played where the game is based on the content of an advertisement or commercial. In some embodiments, users are provided with a template and/or other facilities to generate separate games and contests within the games and promotions available to all.

In some embodiments, a contest involves a sweepstakes event, a game of skill or a promotional event available to all viewing a common event, such as a television broadcast or webcast. In some embodiments, the event is a television commercial. In some embodiments, each and every viewer receives a pre-determined amount of fungible currency such as "points." In some embodiments, the points are earned for watching and/or participating with the television commercial. In some embodiments, the points are redeemable for prizes, services or any other purpose. A user or member of the service is able to choose from an existing template of game formats, or segments of formats, and using the service's ability to couple to and communicate with their friends who are members watching or otherwise, or through social networks such as Facebook, Twitter or Google+, invite friends to participate in their separate event. In some

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embodiments, the event is able to require all participants in a cohort to pool all points they are to receive for watching and have all points go to that member from this cohort chosen at random utilizing software supplied by the company operating the service. The system selects and credits all of the points won to the appropriate person's account. Instead of the points being awarded by chance, the winner of the points is based on skill, for example, is able to be the person from the cohort who answers all of the questions correctly with the cumulative fastest response time (e.g. the least time elapsed between display of the question and the entry of the correct answer). In some embodiments, the points are awarded in another manner. In some cases, users form teams and challenge other competitors (e.g. friends) to form teams where total scores are used, for teams with a specific number of members, or average scores for teams with unlimited number of members.

In some embodiments, participants about to watch a television commercial in exchange for a free entry into a sweepstakes available to all viewers have the ability to invite friends to pool their sweepstakes entries so that if any of the accepting members of the group is chosen, the resulting award is divided among the group as provided by the terms of the invitation, for example, to be shared equally or to be divided equally among participants (possibly participants chosen at random). In some embodiments, the contest involves solving a puzzle or playing a word game like Scrabble®, where team contests are enabled which permit teams of friends to work collaboratively.

Users are able to leverage various groups of friends to join a closed contest, where the organizer not only provides the system and method of generating the group but also provides various templates or separate elements of games and contests allowing the organizer/inviter to click on the desired elements, designate eligible friends, and have a company generate the separate contest, administer the contest and the results and credit the winnings.

In some embodiments, payment of separate consideration such as "points" from member's credit balances or separate cash micropayments is able to be implemented. In some embodiments, a user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

In some embodiments, a game of skill is synchronized with a television broadcast. The synchronization is able to be implemented in any manner including, but not limited to, watermarking, fingerprinting and any other implementation. For example, the mobile device and/or the game of skill application determines the start (or some other point) in a broadcast, synchronizes the game with the broadcast. For example, a game that is based on commercials, is synchronized with the broadcast, so that when the commercials appear, the game begins. In some embodiments, advertisements/commercials are displayed on a user's mobile device synchronized with the content of the television. For example, if user is watching football on television, the mobile device is able to detect that and present the user a football or beer advertisement.

One methodology of synchronizing a game of skill or chance with a television broadcast requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

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Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the “lock outs” to accommodate the systemic delay in the delivery of the game data on the cellular networks. In some embodiments, a signal based on audio recognition is sent to a server which synchronizes a preproduced file displayed on cohorts’ clients.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone’s RAM. Then, time synchronization would be launched.

One more methodology, referred to as watermarking, uses an audio signal, possibly sub-audible to humans, typically an audio artifact unique to a particular program, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

“Fingerprinting” records the soundtrack of every television programs’ audio to a server. The microphone on a client is coupled to a massive audio archive on a server to identify what television program is being viewed and synchronize files on a server with the unfolding broadcast including the commercials.

In some embodiments, the game experience for users competing in games of skill or chance who experience a variety of propagation delays relating to where and how they receive a television broadcast is synchronized (e.g. using watermarking or fingerprinting).

To utilize the present invention, users select from or generate competition groups to participate in. The users select system generated competition groups which are specific to levels, geographic locations and other general categories. The users are also able to generate their own competition groups which include friends, family, co-workers or other groups of people they choose. After the competition groups are generated, users are able to join whichever group they are invited to. After joining one or more groups, the users are able to join additional groups beyond that as they are generated and become available to the user. A user is informed of the competition groups available for entering either by email, Short Message Service (SMS) text message, voice message or when the user couples to the network to view/play competitions. After joining the desired competition groups, the user participates in the competitions by answering questions or making selections based on viewing a sporting event, television show, game show, commercials contained within the broadcast or other event

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where skill or chance is involved in making choices. In addition, games of skill or games of chance with a common start time can be conducted simultaneously in real-time, based on classic card, dice, trivia, word and other games. The selections/answers/predictions are stored and results and/or standings are sent to the user. The results and/or standings throughout the competition show how well the user is doing compared to other competitors via standings, and when the competition is over, the results and/or standings determine who the winner is. Additionally, since multiple competitions are occurring based on a single event, the results and standings are organized so that the user is able to understand how he is doing in each event. For example, if a user is winning by a large margin in his two friendly competitions, but is slightly out of prize position in the open competition, he will not simply relax and coast to victory in his friendly competitions. He is able to realize that by performing slightly better, he still has a chance to win a prize in the open competition, while still winning easily in the friendly competitions.

In operation, the present invention allows users to set up and compete in multiple competitions for a single event. Although users are competing against typically different competitors in different competition groups, the same selections are utilized to produce scores that have specific meaning based on the competition group. As described above, a user may lose in one competition group but win in another competition group because the competitors are different. Also, the requirements of each group are different as well. For example, in team play, if the top two scores are counted and the user has one of the top two scores, then his score is important even though he lost in a different competition group. In another example, the competition group is a season long event where there is no weekly winner, but only a year-end winner. Thus, although the competitor is doing terrible one week and has no chance of winning the separate weekly competition, the user is still encouraged to do as well as possible for the year-end total. By allowing users to compete in multiple competition groups for the same event, the user interaction increases substantially. For example, instead of a user simply playing his standard weekly intermediate football competition, the user is also invited to play in his family’s tournament for bragging rights, his friend’s competition where the winner gets \$20 and his co-worker’s competition where the lowest score pays for a round of drinks the following Friday. With more chances to win, users have a much more vested interest in competing. To ensure users do not get frustrated with the scoring, the results and/or standings are displayed in a very user-friendly format so that a user knows how well he is doing in each respective competition.

In some embodiments, multiple servers are used within the network. For example, one server is dedicated for the scoring, a separate server is dedicated for the database and another server is dedicated for hosting the graphical user interface.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

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What is claimed is:

1. A method programmed in a server device, the method comprising:

- a. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;
- b. providing to a user device from the server device the set of competitive participant groups to join;
- c. receiving user input including a selection of a plurality of competitive participant groups to join, wherein the plurality of competitive participant groups correspond to one or more events;
- d. receiving additional user input including a set of event selections related to the one or more events, wherein the set of event selections comprises predictions available before the one or more events of occurrences happening during the one or more events and enables simultaneously participating with the plurality of competitive participant groups; and
- e. triggering a lockout signal at the server device to prevent further additional user input.

2. The method of claim 1 wherein the set of competitive participant groups to join is further based on a user's skill level.

3. The method of claim 1 wherein the set of competitive participant groups to join is further based on an amount of money risked by a user.

4. The method of claim 1 wherein the set of competitive participant groups to join is further based on a number of competitors in the participant groups.

5. The method of claim 1 wherein the set of competitive participant groups to join is further based on a division of winnings among participants in the group.

6. The method of claim 1 further comprising receiving the user input to join an additional competitive participant group that has been generated after a user has selected the plurality of competitive participant groups to join.

7. The method of claim 1 further comprising providing at least one competitive participant group of the set of competitive participant groups to join using a short message service message.

8. The method of claim 1 further comprising providing real-time standings separated based on each competitive participant group.

9. The method of claim 1 wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

10. The method of claim 1 wherein the lockout signal occurs immediately before participants are able to see or hear relevant live action unfold.

11. The method of claim 1 wherein the lockout signal involves an in-progress play in the event, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

12. The method of claim 1 wherein the lockout signal suspends an ability to enter a prediction for a limited amount of time.

13. The method of claim 1 wherein the set of event selections further comprises predictions available during the one or more events of occurrences happening during the one or more events.

14. A server device comprising:

- a. a memory for storing an application, the application configured for

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- i. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;
- ii. providing the set of competitive participant groups to join;
- iii. receiving user input including a selection of a plurality of competitive participant groups to join, wherein the plurality of competitive participant groups corresponds to one or more events;
- iv. receiving additional user input including a set of event selections related to the one or more events, wherein the set of event selections comprises predictions available before the one or more events of occurrences happening during the one or more events and enables simultaneously participating with the plurality of competitive participant groups;
- v. triggering a lockout signal to prevent further additional user input; and
- vi. providing real-time standings and results related to the set of event selections simultaneously to each of the competitive participant groups, wherein the real-time standings are based on the results; and
- b. a processor for processing the application.

15. The server device of claim 14 wherein the application is further configured for receiving the user input to join an additional competitive participant group that has been generated after a user has selected the plurality of competitive participant groups to join.

16. The server device of claim 14 wherein the application is further configured for providing at least one competitive participant group of the set of competitive participant groups to join using a short message service message.

17. The server device of claim 14 wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

18. The server device of claim 14 wherein the lockout signal involves an in-progress play in the event, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

19. The server device of claim 14 wherein the set of competitive participant groups to join is further based on a user's skill level.

20. The server device of claim 14 wherein the set of competitive participant groups to join is further based on an amount of money risked by a user.

21. The server device of claim 14 wherein the set of competitive participant groups to join is further based on a number of competitors in the participant groups.

22. The server device of claim 14 wherein the set of competitive participant groups to join is further based on a division of winnings among participants in the group.

23. A device comprising:

- a. a memory for storing an application, the application configured for
 - i. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;
 - ii. receiving the set of competitive participant groups to join;
 - iii. receiving user input including a selection of a plurality of competitive participant groups to join, wherein the plurality of competitive participant groups corresponds to one or more events;
 - iv. receiving additional user input including a set of event selections related to the one or more events,

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wherein the set of event selections comprises predictions available before the one or more events of occurrences happening during the one or more events and enables simultaneously participating with the plurality of competitive participant groups;

v. receiving a lockout signal to prevent further additional user input; and

vi. displaying real-time standings and results related to the set of event selections simultaneously to each of the competitive participant groups, wherein the real-time standings are based on the results; and

b. a processor for processing the application.

24. The device of claim 23 wherein the application is further configured for receiving the user input to join an additional competitive participant group that has been generated after a user has selected the plurality of competitive participant groups to join.

25. The device of claim 23 wherein the application is further configured for receiving at least one competitive participant group of the set of competitive participant groups to join using a short message service message.

26. The device of claim 23 wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

27. The device of claim 23 wherein the set of competitive participant groups to join is further based on a user's skill level.

28. The device of claim 23 wherein the set of competitive participant groups to join is further based on an amount of money risked by a user.

29. The device of claim 23 wherein the set of competitive participant groups to join is further based on a number of competitors in the participant groups.

30. The device of claim 23 wherein the set of competitive participant groups to join is further based on a division of winnings among participants in the group.

31. A method programmed in a server device, the method comprising:

a. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;

b. receiving user input including a set of event selections related to one or more events, wherein the set of event selections comprises predictions available prior to the beginning of the first one of the one or more events, of occurrences happening during the one or more events and enables simultaneously participating with a plurality of the competitive participant groups; and

c. triggering a lockout signal at the server device to prevent further additional user input.

32. The method of claim 31 wherein the plurality of competitive participant groups is further based on a user's skill level.

33. The method of claim 31 wherein the plurality of competitive participant groups is further based on an amount of money risked by a user.

34. The method of claim 31 wherein the plurality of competitive participant groups is further based on a number of competitors in the participant groups.

35. The method of claim 31 wherein the plurality of competitive participant groups is further based on a division of winnings among participants in the group.

36. The method of claim 31 further comprising receiving additional user input including a selection of the plurality of competitive participant groups to join.

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37. The method of claim 36 further comprising providing at least one competitive participant group of the plurality of competitive participant groups to join using a short message service message.

38. The method of claim 31 further comprising providing real-time standings separated based on each competitive participant group.

39. The method of claim 31 wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

40. The method of claim 31 wherein the lockout signal occurs immediately before participants are able to see or hear relevant live action unfold.

41. The method of claim 31 wherein the set of event selections further comprises predictions available during the one or more events of occurrences happening during the one or more events.

42. A server device comprising:

a. a memory for storing an application, the application configured for

i. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;

ii. receiving user input including a set of event selections related to one or more events, wherein the set of event selections comprises predictions available prior to the beginning of the first one of the one or more events, of occurrences happening during the one or more events and enables simultaneously participating with the plurality of competitive participant groups;

iii. triggering a lockout signal to prevent further additional user input; and

iv. providing real-time standings and results related to the set of event selections simultaneously to each of the competitive participant groups, wherein the real-time standings are based on the results; and

b. a processor for processing the application.

43. The server device of claim 42 wherein the application is further configured for receiving the user input to join an additional competitive participant group that has been generated after a user has selected the plurality of competitive participant groups to join.

44. The server device of claim 42 wherein the application is further configured for providing at least one competitive participant group of the set of competitive participant groups to join using a short message service message.

45. The server device of claim 42 wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

46. The server device of claim 42 wherein the set of competitive participant groups is further based on a user's skill level.

47. The server device of claim 42 wherein the set of competitive participant groups is further based on an amount of money risked by a user.

48. The server device of claim 42 wherein the set of competitive participant groups is further based on a number of competitors in the participant groups.

49. The server device of claim 42 wherein the set of competitive participant groups is further based on a division of winnings among participants in the group.

* * * * *

Exhibit 8

(12) **United States Patent**
Lockton et al.

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(45) **Date of Patent:** **Apr. 9, 2024**

(54) **METHOD OF AND SYSTEM FOR
CONDUCTING MULTIPLE CONTESTS OF
SKILL WITH A SINGLE PERFORMANCE**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

2,010,516 A 8/1935 Hoffmann
2,051,615 A 8/1936 Miles
(Continued)

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FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

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NC (US)

OTHER PUBLICATIONS

(*) Notice: Subject to any disclaimer, the term of this
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U.S.C. 154(b) by 0 days.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare
Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

(Continued)

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Law Corporation

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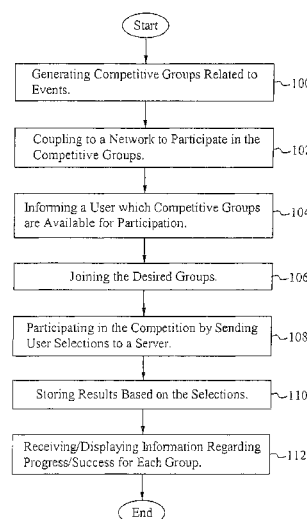
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None

See application file for complete search history.

(57) **ABSTRACT**

A method of and system for conducting multiple competi-
tions of skill for a single performance are described herein.
User generated competition groups and system generated
competition groups allow users to participate in multiple
competitions at once based on answering the same questions
or making the same selections related to a single event. The
users are informed of each competition either via email, text
message or when logging into the network via a website. The
users select which competitions groups to join. After joining
the desired groups, the users then make their selections
related to the event which are transmitted to the network
where results are tabulated and transmitted back to the users.
The results are separated based on each competition group,
so that users can continually know where they stand in each
separate competition. With multiple competition groups,
users are able to have varying success from the same
performance in multiple competitions.

19 Claims, 3 Drawing Sheets



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- continuation of application No. 16/426,788, filed on May 30, 2019, now Pat. No. 10,744,414, which is a continuation of application No. 15/900,480, filed on Feb. 20, 2018, now Pat. No. 10,343,071, which is a continuation of application No. 15/296,983, filed on Oct. 18, 2016, now Pat. No. 9,919,221, which is a continuation of application No. 14/927,276, filed on Oct. 29, 2015, now Pat. No. 9,498,724, which is a continuation of application No. 14/723,363, filed on May 27, 2015, now Pat. No. 9,314,701, which is a continuation of application No. 14/044,173, filed on Oct. 2, 2013, now Pat. No. 9,067,143, which is a continuation of application No. 13/215,052, filed on Aug. 22, 2011, now Pat. No. 8,622,798, which is a continuation of application No. 11/652,240, filed on Jan. 10, 2007, now Pat. No. 8,002,618.
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- (56) **References Cited**
U.S. PATENT DOCUMENTS
- | | | | | | | | |
|-----------|---|---------|-------------------|-----------|----|---------|-------------------|
| 2,193,638 | A | 3/1940 | Morton | 5,417,424 | A | 5/1995 | Snowden |
| 2,274,933 | A | 3/1942 | Peck | 5,462,275 | A | 10/1995 | Lowe et al. |
| 2,831,105 | A | 4/1958 | Parker | 5,479,492 | A | 12/1995 | Hofstee et al. |
| 3,550,944 | A | 12/1970 | Chamberlin | 5,488,659 | A | 1/1996 | Millani |
| 3,562,650 | A | 2/1971 | Gossard et al. | 5,519,433 | A | 5/1996 | Lappington |
| 3,689,071 | A | 9/1972 | Kucera | 5,530,483 | A | 6/1996 | Cooper |
| 4,141,548 | A | 2/1979 | Everton | 5,553,120 | A | 9/1996 | Katz |
| 4,270,755 | A | 6/1981 | Willhide et al. | 5,566,291 | A | 10/1996 | Boulton et al. |
| 4,386,377 | A | 5/1983 | Hunter, Jr. | 5,585,975 | A | 12/1996 | Bliss |
| 4,496,148 | A | 1/1985 | Morstain et al. | 5,586,257 | A | 12/1996 | Perlman |
| 4,521,803 | A | 6/1985 | Glittinger | 5,589,765 | A | 12/1996 | Ohmart et al. |
| 4,592,546 | A | 6/1986 | Fascenda et al. | 5,594,938 | A | 1/1997 | Engel |
| 4,816,904 | A | 3/1989 | McKenna et al. | 5,618,232 | A | 4/1997 | Martin |
| 4,918,603 | A | 4/1990 | Hughes et al. | 5,628,684 | A | 5/1997 | Jean-Etienne |
| 4,930,010 | A | 5/1990 | MacDonald | 5,636,920 | A | 6/1997 | Shur et al. |
| 5,013,038 | A | 5/1991 | Luvenberg | 5,638,113 | A | 6/1997 | Lappington |
| 5,018,736 | A | 5/1991 | Pearson et al. | 5,643,088 | A | 7/1997 | Vaughn et al. |
| 5,035,422 | A | 7/1991 | Berman | 5,663,757 | A | 9/1997 | Morales |
| 5,073,931 | A | 12/1991 | Audebert et al. | 5,711,715 | A | 1/1998 | Ringo |
| 5,083,271 | A | 1/1992 | Thatcher et al. | 5,759,101 | A | 6/1998 | Won Kohom |
| 5,083,800 | A | 1/1992 | Lockton | 5,761,606 | A | 6/1998 | Wolzien |
| 5,119,295 | A | 6/1992 | Kapur | 5,762,552 | A | 6/1998 | Young et al. |
| 5,120,076 | A | 6/1992 | Luxenberg et al. | 5,764,275 | A | 6/1998 | Lappington et al. |
| 5,213,337 | A | 5/1993 | Sherman | 5,794,210 | A | 8/1998 | Goldhaber et al. |
| 5,227,874 | A | 7/1993 | Von Kohom | 5,805,230 | A | 9/1998 | Staron |
| 5,256,863 | A | 10/1993 | Ferguson | 5,813,913 | A | 9/1998 | Berner et al. |
| 5,263,723 | A | 11/1993 | Pearson et al. | 5,818,438 | A | 10/1998 | Howe et al. |
| 5,283,734 | A | 2/1994 | Von Kohorn | 5,828,843 | A | 10/1998 | Grimm |
| 5,327,485 | A | 7/1994 | Leaden | 5,838,774 | A | 11/1998 | Weiser, Jr. |
| 5,343,236 | A | 8/1994 | Koppe et al. | 5,838,909 | A | 11/1998 | Roy |
| 5,343,239 | A | 8/1994 | Lappington et al. | 5,846,132 | A | 12/1998 | Junkin |
| | | | | 5,848,397 | A | 12/1998 | Marsh et al. |
| | | | | 5,860,862 | A | 1/1999 | Junkin |
| | | | | 5,882,260 | A | 3/1999 | Marks |
| | | | | 5,894,556 | A | 4/1999 | Grimm |
| | | | | 5,916,024 | A | 6/1999 | Von Kohom |
| | | | | 5,870,683 | A | 9/1999 | Wells et al. |
| | | | | 5,970,143 | A | 10/1999 | Schneier et al. |
| | | | | 5,971,854 | A | 10/1999 | Pearson et al. |
| | | | | 5,987,440 | A | 11/1999 | O'Neil et al. |
| | | | | 6,009,458 | A | 12/1999 | Hawkins et al. |
| | | | | 6,016,337 | A | 1/2000 | Pykalisto |
| | | | | 6,038,599 | A | 3/2000 | Black |
| | | | | 6,042,477 | A | 3/2000 | Addink |
| | | | | 6,015,344 | A | 4/2000 | Kelly et al. |
| | | | | 6,064,449 | A | 5/2000 | White |
| | | | | 6,104,815 | A | 8/2000 | Alcorn et al. |
| | | | | 6,110,041 | A | 8/2000 | Walker et al. |
| | | | | 6,117,013 | A | 9/2000 | Elba |
| | | | | 6,126,543 | A | 10/2000 | Friedman |
| | | | | 6,128,660 | A | 10/2000 | Grimm |
| | | | | 6,135,881 | A | 10/2000 | Abbott et al. |
| | | | | 6,154,131 | A | 11/2000 | Jones, II |
| | | | | 6,174,237 | B1 | 1/2001 | Stephenson |
| | | | | 6,182,084 | B1 | 1/2001 | Cockrell et al. |
| | | | | 6,193,610 | B1 | 2/2001 | Junkin |
| | | | | 6,222,642 | B1 | 4/2001 | Farrell et al. |
| | | | | 6,233,736 | B1 | 5/2001 | Wolzien |
| | | | | 6,251,017 | B1 | 6/2001 | Leason et al. |
| | | | | 6,264,650 | B1 | 7/2001 | Goldberg |
| | | | | 6,267,670 | B1 | 7/2001 | Walker |
| | | | | 6,287,199 | B1 | 9/2001 | McKeown et al. |
| | | | | 6,293,868 | B1 | 9/2001 | Bernard |
| | | | | 6,312,336 | B1 | 11/2001 | Handelman et al. |
| | | | | 6,343,320 | B1 | 1/2002 | Fairchild |
| | | | | 6,345,297 | B1 | 2/2002 | Grimm |
| | | | | 6,371,855 | B1 | 4/2002 | Gavriloff |
| | | | | 6,373,462 | B1 | 4/2002 | Pan |
| | | | | 6,411,969 | B1 | 6/2002 | Tam |
| | | | | 6,416,414 | B1 | 7/2002 | Stadelmann |
| | | | | 6,418,298 | B1 | 7/2002 | Sonnenfeld |
| | | | | 6,425,828 | B2 | 7/2002 | Walker et al. |
| | | | | 6,434,398 | B1 | 8/2002 | Inselberg |
| | | | | 6,446,262 | B1 | 9/2002 | Malaure et al. |
| | | | | 6,470,180 | B1 | 10/2002 | Kotzin et al. |
| | | | | 6,475,090 | B2 | 11/2002 | Gregory |
| | | | | 6,524,189 | B1 | 2/2003 | Rautila |
| | | | | 6,527,641 | B1 | 3/2003 | Sinclair et al. |
| | | | | 6,530,082 | B1 | 3/2003 | Del Sesto et al. |

US 11,951,402 B2

Page 3

(56)

References Cited

U.S. PATENT DOCUMENTS

6,536,037	B1	3/2003	Guheen et al.	7,233,922	B2	6/2007	Asher et al.
6,537,150	B1	3/2003	Luciano	7,240,093	B1	7/2007	Danieli et al.
6,578,068	B1	6/2003	Bowma-Amuah	7,244,181	B2	7/2007	Wang et al.
6,594,098	B1	7/2003	Sutardja	7,249,367	B2	7/2007	Bove, Jr. et al.
6,604,997	B2	7/2003	Saidakovsky et al.	7,254,605	B1	8/2007	Strum
6,610,953	B1	8/2003	Tao et al.	7,260,782	B2	8/2007	Wallace et al.
6,611,755	B1	8/2003	Coffee	RE39,818	E	9/2007	Slifer
6,648,760	B1	11/2003	Nicastro	7,283,830	B2	10/2007	Buckley
6,659,860	B1	12/2003	Yamamoto et al.	7,288,027	B2	10/2007	Overton
6,659,861	B1	12/2003	Faris	7,341,517	B2	3/2008	Asher et al.
6,659,872	B1	12/2003	Kaufman et al.	7,343,617	B1	3/2008	Kartcher et al.
6,690,661	B1	2/2004	Agarwal et al.	7,347,781	B2	3/2008	Schultz
6,697,869	B1	2/2004	Mallart	7,351,149	B1	4/2008	Simon et al.
6,718,350	B1	4/2004	Karbowski	7,367,042	B1	4/2008	Dakss et al.
6,752,396	B2	6/2004	Smith	7,379,705	B1	5/2008	Rados et al.
6,758,754	B1	7/2004	Lavanchy et al.	7,389,144	B1	6/2008	Osorio
6,758,755	B2	7/2004	Kelly et al.	7,430,718	B2	9/2008	Garipey-Viles
6,760,595	B2	7/2004	Insellberg	7,452,273	B2	11/2008	Amaitis et al.
6,763,377	B1	7/2004	Balknap et al.	7,460,037	B2	12/2008	Cattone et al.
6,766,524	B1	7/2004	Matheny et al.	7,461,067	B2	12/2008	Dewing et al.
6,774,926	B1	8/2004	Ellis et al.	7,502,610	B2	3/2009	Maher
6,785,561	B1	8/2004	Kim	7,510,474	B2	3/2009	Carter, Sr.
6,801,380	B1	10/2004	Saturdja	7,517,282	B1	4/2009	Pryor
6,806,889	B1	10/2004	Malaure et al.	7,534,169	B2	5/2009	Amaitis et al.
6,807,675	B1	10/2004	Millard et al.	7,543,052	B1	6/2009	Cesa Klein
6,811,482	B2	11/2004	Letovsky	7,562,134	B1	7/2009	Fingerhut et al.
6,811,487	B2	11/2004	Sengoku	7,602,808	B2	10/2009	Ullmann
6,816,628	B1	11/2004	Sarachik et al.	7,610,330	B1	10/2009	Quinn
6,817,947	B2	11/2004	Tanskanen	7,614,944	B1	11/2009	Hughes et al.
6,824,469	B2	11/2004	Allibhoy et al.	7,630,986	B1	12/2009	Herz et al.
6,837,789	B2	1/2005	Garahi et al.	7,693,781	B2	4/2010	Asher et al.
6,837,791	B1	1/2005	McNutt et al.	7,699,707	B2	4/2010	Bahou
6,840,861	B2	1/2005	Jordan et al.	7,702,723	B2	4/2010	Dyl
6,845,389	B1	1/2005	Sen	7,711,628	B2	5/2010	Davie et al.
6,846,239	B2	1/2005	Washio	7,729,286	B2	6/2010	Mishra
6,857,122	B1	2/2005	Takeda et al.	7,753,772	B1	7/2010	Walker
6,863,610	B2	3/2005	Vancraeynest	7,753,789	B2	7/2010	Walker et al.
6,870,720	B2	3/2005	Iwata et al.	7,780,528	B2	8/2010	Hirayama
6,871,226	B1	3/2005	Ensley et al.	7,828,661	B1	11/2010	Fish
6,873,610	B1	3/2005	Noever	7,835,961	B2	11/2010	Davie et al.
6,884,166	B2	4/2005	Leen et al.	7,860,993	B2	12/2010	Chintala
6,884,172	B1	4/2005	Lloyd et al.	7,886,003	B2	2/2011	Newman
6,887,159	B2	5/2005	Leen et al.	7,907,211	B2	3/2011	Oostveen et al.
6,888,929	B1	5/2005	Saylor	7,907,598	B2	3/2011	Anisimov
6,893,347	B1	5/2005	Zilliacus et al.	7,909,332	B2	3/2011	Root
6,898,762	B2	5/2005	Ellis et al.	7,925,756	B1	4/2011	Riddle
6,899,628	B2	5/2005	Leen et al.	7,926,810	B2	4/2011	Fisher et al.
6,903,681	B2	6/2005	Faris	7,937,318	B2	5/2011	Davie et al.
6,908,389	B1	6/2005	Puskala	7,941,482	B2	5/2011	Bates
6,942,574	B1	9/2005	LeMay et al.	7,941,804	B1	5/2011	Herington
6,944,228	B1	9/2005	Dakss et al.	7,951,002	B1	5/2011	Brosnan
6,960,088	B1	11/2005	Long	7,976,389	B2	7/2011	Cannon et al.
6,978,053	B1	12/2005	Sarachik et al.	8,002,618	B1	8/2011	Lockton
7,001,279	B1	2/2006	Barber et al.	8,006,314	B2	8/2011	Wold
7,029,394	B2	4/2006	Leen et al.	8,025,565	B2	9/2011	Leen et al.
7,035,626	B1	4/2006	Luciano, Jr.	8,028,315	B1	9/2011	Barber
7,035,653	B2	4/2006	Simon et al.	8,082,150	B2	12/2011	Wold
7,058,592	B1	6/2006	Heckerman et al.	8,086,445	B2	12/2011	Wold et al.
7,076,434	B1	7/2006	Newman et al.	8,086,510	B2	12/2011	Amaitis et al.
7,085,552	B2	8/2006	Buckley	8,092,303	B2	1/2012	Amaitis et al.
7,116,310	B1	10/2006	Evans et al.	8,092,306	B2	1/2012	Root
7,117,517	B1	10/2006	Milazzo et al.	8,105,141	B2	1/2012	Leen et al.
7,120,924	B1	10/2006	Katcher et al.	8,107,674	B2	1/2012	Davis et al.
7,124,410	B2	10/2006	Berg	8,109,827	B2	2/2012	Cahill et al.
7,125,336	B2	10/2006	Anttila et al.	8,128,474	B2	3/2012	Amaitis et al.
7,136,871	B2	11/2006	Ozer et al.	8,147,313	B2	4/2012	Amaitis et al.
7,144,011	B2	12/2006	Asher et al.	8,147,373	B2	4/2012	Amaitis et al.
7,169,050	B1	1/2007	Tyler	8,149,530	B1	4/2012	Lockton et al.
7,185,355	B1	2/2007	Ellis	8,155,637	B2	4/2012	Fujisawa
7,187,658	B2	3/2007	Koyanagi	8,162,759	B2	4/2012	Yamaguchi
7,191,447	B1	3/2007	Ellis et al.	8,176,518	B1	5/2012	Junkin et al.
7,192,352	B2	3/2007	Walker et al.	8,186,682	B2	5/2012	Amaitis et al.
7,194,758	B1	3/2007	Waki et al.	8,204,808	B2	6/2012	Amaitis et al.
7,228,349	B2	6/2007	Barone, Jr. et al.	8,219,617	B2	7/2012	Ashida
7,231,630	B2	6/2007	Acott et al.	8,240,669	B2	8/2012	Asher et al.
				8,246,048	B2	8/2012	Asher et al.
				8,267,403	B2	9/2012	Fisher et al.
				8,342,924	B2	1/2013	Leen et al.
				8,342,942	B2	1/2013	Amaitis et al.

US 11,951,402 B2

Page 4

(56)

References Cited

U.S. PATENT DOCUMENTS

8,353,763 B2	1/2013	Amaitis et al.	9,724,603 B2	8/2017	Lockton et al.
8,376,855 B2	2/2013	Lockton et al.	9,744,453 B2	8/2017	Lockton et al.
8,396,001 B2	3/2013	Jung	9,805,549 B2	10/2017	Asher et al.
8,397,257 B1	3/2013	Barber	9,821,233 B2	11/2017	Lockton et al.
8,465,021 B2	6/2013	Asher et al.	9,878,243 B2	1/2018	Lockton et al.
8,473,393 B2	6/2013	Davie et al.	9,881,337 B2	1/2018	Jaycobs et al.
8,474,819 B2	7/2013	Asher et al.	9,901,820 B2	2/2018	Lockton et al.
8,535,138 B2	9/2013	Amaitis et al.	9,908,053 B2	3/2018	Lockton et al.
8,538,563 B1	9/2013	Barber	9,919,210 B2	3/2018	Lockton et al.
8,543,487 B2	9/2013	Asher et al.	9,919,211 B2	3/2018	Lockton et al.
8,555,313 B2	10/2013	Newman	9,919,221 B2	3/2018	Lockton et al.
8,556,691 B2	10/2013	Leen et al.	9,978,217 B2	5/2018	Lockton et al.
8,585,490 B2	11/2013	Amaitis et al.	9,993,730 B2	6/2018	Lockton et al.
8,597,117 B2	12/2013	Bruce	9,999,834 B2	6/2018	Lockton et al.
8,622,798 B2	1/2014	Lockton et al.	10,052,557 B2	8/2018	Lockton et al.
8,632,392 B2	1/2014	Shore et al.	10,089,815 B2	10/2018	Asher et al.
8,634,943 B2	1/2014	Root	10,096,210 B2	10/2018	Amaitis et al.
8,638,517 B2	1/2014	Lockton et al.	10,137,369 B2	11/2018	Lockton et al.
8,641,511 B2	2/2014	Ginsberg et al.	10,150,031 B2	12/2018	Lockton et al.
8,659,848 B2	2/2014	Lockton et al.	10,165,339 B2	12/2018	Huske et al.
8,672,751 B2	3/2014	Leen et al.	10,186,116 B2	1/2019	Lockton et al.
8,699,168 B2	4/2014	Lockton et al.	10,195,526 B2	2/2019	Lockton et al.
8,705,195 B2	4/2014	Lockton et al.	10,226,698 B1	3/2019	Lockton et al.
8,708,789 B2	4/2014	Asher et al.	10,226,705 B2	3/2019	Lockton et al.
8,717,701 B2	5/2014	Lockton et al.	10,232,270 B2	3/2019	Lockton et al.
8,727,352 B2	5/2014	Amaitis et al.	10,248,290 B2	4/2019	Galfond et al.
8,734,227 B2	5/2014	Leen et al.	10,279,253 B2	5/2019	Lockton et al.
8,737,004 B2	5/2014	Lockton et al.	10,360,767 B2	7/2019	Russell et al.
8,738,694 B2	5/2014	Huske et al.	10,410,474 B2	9/2019	Lockton et al.
8,771,058 B2	7/2014	Alderucci et al.	10,438,451 B2	10/2019	Amaitis et al.
8,780,482 B2	7/2014	Lockton et al.	10,569,175 B2	2/2020	Kosai et al.
8,805,732 B2	8/2014	Davie et al.	10,593,157 B2	3/2020	Simons et al.
8,813,112 B1	8/2014	Cibula et al.	10,653,955 B2	5/2020	Lockton et al.
8,814,664 B2	8/2014	Amaitis et al.	10,695,672 B2	6/2020	Lockton et al.
8,817,408 B2	8/2014	Lockton et al.	10,709,987 B2	7/2020	Lockton et al.
8,837,072 B2	9/2014	Lockton et al.	10,721,543 B2	7/2020	Huske et al.
8,849,225 B1	9/2014	Choti et al.	10,825,294 B2	11/2020	Katz et al.
8,849,255 B2	9/2014	Choti et al.	10,937,279 B1	3/2021	Workman et al.
8,858,313 B1	10/2014	Selfors et al.	10,981,070 B2	4/2021	Isgreen et al.
8,870,639 B2	10/2014	Lockton et al.	11,077,366 B2	8/2021	Lockton et al.
8,935,715 B2	1/2015	Cibula et al.	11,082,746 B2	8/2021	Lockton et al.
9,056,251 B2 *	6/2015	Lockton et al. G07F 17/3276	11,083,965 B2	8/2021	Lockton et al.
9,067,143 B2 *	6/2015	Lockton et al. G07F 17/3295	11,154,775 B2	10/2021	Lockton et al.
9,069,651 B2	6/2015	Barber et al.	11,179,632 B2	11/2021	Lockton et al.
9,076,303 B1	7/2015	Park et al.	11,185,770 B2	11/2021	Lockton et al.
9,098,883 B2	8/2015	Asher et al.	2001/0004609 A1	6/2001	Walker et al.
9,111,417 B2	8/2015	Leen et al.	2001/0005670 A1	6/2001	Lahtinen et al.
9,205,339 B2	12/2015	Cibula et al.	2001/0013067 A1	8/2001	Koyanagi et al.
9,233,293 B2	1/2016	Lockton et al.	2001/0013125 A1	8/2001	Kitsukawa et al.
9,258,601 B2	2/2016	Lockton et al.	2001/0020298 A1	9/2001	Rector, Jr. et al.
9,270,789 B2	2/2016	Huske et al.	2001/0032333 A1	10/2001	Flickinger et al.
9,289,692 B2	3/2016	Barber et al.	2001/0036272 A1	11/2001	Hirayama et al.
9,306,952 B2	4/2016	Burman et al.	2001/0036853 A1	11/2001	Thomas et al.
9,314,686 B2	4/2016	Lockton et al.	2001/0044339 A1	11/2001	Cordero et al.
9,314,701 B2	4/2016	Lockton et al.	2001/0054019 A1	12/2001	de Fabrega et al.
9,355,518 B2	5/2016	Amaitis et al.	2002/0010789 A1	1/2002	Lord et al.
9,406,189 B2	8/2016	Scott et al.	2002/0018477 A1	2/2002	Katz et al.
9,430,901 B2	8/2016	Amaitis et al.	2002/0026321 A1	2/2002	Faris et al.
9,457,272 B2	10/2016	Lockton et al.	2002/0029381 A1	3/2002	Inselberg et al.
9,498,724 B2	11/2016	Lockton et al.	2002/0035609 A1	3/2002	Lessard et al.
9,501,904 B2	11/2016	Lockton et al.	2002/0037766 A1	3/2002	Muniz et al.
9,504,922 B2	11/2016	Lockton et al.	2002/0069265 A1	3/2002	Bountour et al.
9,511,287 B2	12/2016	Lockton et al.	2002/0042293 A1	4/2002	Ubale et al.
9,526,991 B2	12/2016	Lockton et al.	2002/0046099 A1	4/2002	Frengut et al.
9,536,396 B2	1/2017	Amaitis et al.	2002/0054088 A1	5/2002	Tanskanen et al.
9,556,991 B2	1/2017	Furuya et al.	2002/0055385 A1	5/2002	Otsu et al.
9,604,140 B2	3/2017	Lockton et al.	2002/0056089 A1	5/2002	Houston et al.
9,652,937 B2	5/2017	Lockton et al.	2002/0059094 A1	5/2002	Hosea et al.
9,662,576 B2	5/2017	Lockton et al.	2002/0059623 A1	5/2002	Rodriguez et al.
9,662,577 B2	5/2017	Lockton et al.	2002/0069076 A1	6/2002	Faris et al.
9,672,692 B2	6/2017	Lockton et al.	2002/0076084 A1	6/2002	Tian et al.
9,687,738 B2	6/2017	Lockton et al.	2002/0078176 A1	6/2002	Nomura et al.
9,687,739 B2	6/2017	Lockton et al.	2002/0083461 A1	6/2002	Hutcheson et al.
9,707,482 B2	7/2017	Lockton et al.	2002/0091833 A1	7/2002	Grimm et al.
9,716,918 B1	7/2017	Lockton et al.	2002/0094869 A1	7/2002	Harkham et al.
			2002/0095333 A1	7/2002	Jokinen et al.
			2002/0097983 A1	7/2002	Wallace et al.
			2002/0099709 A1	7/2002	Wallace et al.
			2002/0100063 A1	7/2002	Herigstad et al.

US 11,951,402 B2

Page 5

(56)

References Cited

U.S. PATENT DOCUMENTS

2002/0103696 A1	8/2002	Huang et al.	2004/0117839 A1	6/2004	Watson et al.
2002/0105535 A1	8/2002	Wallace et al.	2004/0128319 A1	7/2004	Davis et al.
2002/0107073 A1	8/2002	Binney	2004/0139158 A1	7/2004	Datta
2002/0108112 A1	8/2002	Wallace et al.	2004/0139482 A1	7/2004	Hale
2002/0108125 A1	8/2002	Joao	2004/0148638 A1	7/2004	Weisman et al.
2002/0108127 A1	8/2002	Lew et al.	2004/0152517 A1	8/2004	Haedisty
2002/0112249 A1	8/2002	Hendricks et al.	2004/0152519 A1	8/2004	Wang
2002/0115488 A1	8/2002	Berry et al.	2004/0158855 A1	8/2004	Gu et al.
2002/0119821 A1	8/2002	Sen	2004/0162124 A1	8/2004	Barton
2002/0120930 A1	8/2002	Yona	2004/0166873 A1	8/2004	Simic
2002/0124247 A1	9/2002	Houghton	2004/0176162 A1	9/2004	Rothschild
2002/0132614 A1	9/2002	Vanlujit et al.	2004/0178923 A1	9/2004	Kuang
2002/0133817 A1	9/2002	Markel	2004/0183824 A1	9/2004	Benson
2002/0133827 A1	9/2002	Newman et al.	2004/0185881 A1	9/2004	Lee
2002/0142843 A1	10/2002	Roelofs	2004/0190779 A1	9/2004	Sarachik et al.
2002/0144273 A1	10/2002	Reto	2004/0198495 A1	10/2004	Cisneros et al.
2002/0147049 A1	10/2002	Carter, Sr.	2004/0201626 A1	10/2004	Lavoie
2002/0157002 A1	10/2002	Messerges et al.	2004/0203667 A1	10/2004	Shroder
2002/0157005 A1	10/2002	Bunk	2004/0203898 A1	10/2004	Bodin et al.
2002/0159576 A1	10/2002	Adams	2004/0210507 A1	10/2004	Asher et al.
2002/0162031 A1	10/2002	Levin et al.	2004/0215756 A1	10/2004	VanAntwerp
2002/0162117 A1	10/2002	Pearson	2004/0216161 A1	10/2004	Barone, Jr. et al.
2002/0165020 A1	11/2002	Koyama	2004/0216171 A1	10/2004	Barone, Jr. et al.
2002/0165025 A1	11/2002	Kawahara	2004/0224750 A1	11/2004	Ai-Ziyoud
2002/0177483 A1	11/2002	Cannon	2004/0242321 A1	12/2004	Overton
2002/0184624 A1	12/2002	Spencer	2004/0266513 A1	12/2004	Odom
2002/0187825 A1	12/2002	Tracy	2005/0005303 A1	1/2005	Barone, Jr. et al.
2002/0198050 A1	12/2002	Patchen	2005/0021942 A1	1/2005	Diehl et al.
2003/0002638 A1	1/2003	Kaars	2005/0026699 A1	2/2005	Kinzer et al.
2003/0003997 A1	1/2003	Vuong et al.	2005/0028208 A1	2/2005	Ellis
2003/0013528 A1	1/2003	Allibhoy et al.	2005/0043094 A1	2/2005	Nguyen et al.
2003/0023547 A1	1/2003	France	2005/0076371 A1	4/2005	Nakamura
2003/0040363 A1	2/2003	Sandberg	2005/0077997 A1	4/2005	Landram
2003/0054885 A1	3/2003	Pinto et al.	2005/0060219 A1	5/2005	Ditering et al.
2003/0060247 A1	3/2003	Goldberg et al.	2005/0097599 A1	5/2005	Potnick et al.
2003/0066089 A1	4/2003	Anderson	2005/0101309 A1	5/2005	Croome
2003/0069828 A1	4/2003	Blazey et al.	2005/0113164 A1	5/2005	Buecheler et al.
2003/0070174 A1	4/2003	Solomon	2005/0003878 A1	6/2005	Updike
2003/0078924 A1	4/2003	Liechty et al.	2005/0116416 A1	6/2005	Peterson
2003/0086691 A1	5/2003	Yu	2005/0131984 A1	6/2005	Hofmann et al.
2003/0087652 A1	5/2003	Simon et al.	2005/0138668 A1	6/2005	Gray et al.
2003/0088648 A1	5/2003	Bellaton	2005/0144102 A1	6/2005	Johnson
2003/0088878 A1	5/2003	Rogers	2005/0155083 A1	7/2005	Oh
2003/0114224 A1	6/2003	Anttila et al.	2005/0177861 A1	8/2005	Ma et al.
2003/0115152 A1	6/2003	Flaherty	2005/0210526 A1	9/2005	Levy et al.
2003/0125109 A1	7/2003	Green	2005/0216838 A1	9/2005	Graham
2003/0134678 A1	7/2003	Tanaka	2005/0235043 A1	10/2005	Teodosiu et al.
2003/0144017 A1	7/2003	Inselberg	2005/0239551 A1	10/2005	Griswold
2003/0154242 A1	8/2003	Hayes et al.	2005/0255901 A1	11/2005	Kreutzer
2003/0165241 A1	9/2003	Fransdonk	2005/0256895 A1	11/2005	Dussault
2003/0177167 A1	9/2003	Afage et al.	2005/0266869 A1	12/2005	Jung
2003/0177504 A1	9/2003	Paulo et al.	2005/0267969 A1	12/2005	Poikselka et al.
2003/0189668 A1	10/2003	Newman et al.	2005/0273804 A1	12/2005	Preisman
2003/0195023 A1	10/2003	Di Cesare	2005/0283800 A1	12/2005	Ellis et al.
2003/0195807 A1	10/2003	Maggio	2005/0288080 A1	12/2005	Lockton et al.
2003/0208579 A1	11/2003	Brady et al.	2005/0288101 A1	12/2005	Lockton et al.
2003/0211856 A1	11/2003	Zilliacus	2005/0288812 A1	12/2005	Cheng
2003/0212691 A1	11/2003	Kuntala et al.	2006/0020700 A1	1/2006	Qiu
2003/0216185 A1	11/2003	Varley	2006/0025070 A1	2/2006	Kim et al.
2003/0216857 A1	11/2003	Feldman et al.	2006/0046810 A1	3/2006	Tabata
2003/0228866 A1	12/2003	Pezeshki	2006/0047772 A1	3/2006	Crutcher
2003/0233425 A1	12/2003	Lyons et al.	2006/0053390 A1	3/2006	Garipey-Viles
2004/0005919 A1	1/2004	Walker et al.	2006/0058103 A1	3/2006	Danieli
2004/0014524 A1	1/2004	Pearlman	2006/0059161 A1	3/2006	Millett et al.
2004/0015442 A1	1/2004	Hmlinen	2006/0063590 A1	3/2006	Abassi et al.
2004/0022366 A1	2/2004	Ferguson et al.	2006/0082068 A1	4/2006	Patchen
2004/0025190 A1	2/2004	McCalla	2006/0087585 A1	4/2006	Seo
2004/0056897 A1	3/2004	Ueda	2006/0089199 A1	4/2006	Jordan et al.
2004/0060063 A1	3/2004	Russ et al.	2006/0094409 A1	5/2006	Inselberg
2004/0073915 A1	4/2004	Dureau	2006/0101492 A1	5/2006	Lowcock
2004/0088729 A1	5/2004	Petrovic et al.	2006/0111168 A1	5/2006	Nguyen
2004/0093302 A1	5/2004	Baker et al.	2006/0135253 A1	6/2006	George et al.
2004/0152454 A1	5/2004	Kauppinen	2006/0148569 A1	7/2006	Beck
2004/0107138 A1	6/2004	Maggio	2006/0156371 A1	7/2006	Maetz et al.
2004/0117831 A1	6/2004	Ellis et al.	2006/0160597 A1	7/2006	Wright
			2006/0174307 A1	8/2006	Hwang et al.
			2006/0183547 A1	8/2006	McMonigle
			2006/0183548 A1	8/2006	Morris et al.
			2006/0190654 A1	8/2006	Joy

US 11,951,402 B2

Page 6

(56)	References Cited					
	U.S. PATENT DOCUMENTS					
2006/0205483	A1*	9/2006	Meyer	G06Q 20/06 463/25	2010/0296511	A1 11/2010 Prodan
2006/0205509	A1	9/2006	Hirota		2011/0016224	A1 1/2011 Riley
2006/0205510	A1	9/2006	Lauper		2011/0053681	A1 3/2011 Goldman
2006/0217198	A1	9/2006	Johnson		2011/0065490	A1 3/2011 Lutnick
2006/0236352	A1	10/2006	Scott, III		2011/0081958	A1 4/2011 Herman
2006/0248553	A1	11/2006	Mikkelsen et al.		2011/0116461	A1 5/2011 Holt
2006/0248564	A1	11/2006	Zinevitch		2011/0124397	A1 5/2011 Gingher
2006/0256865	A1	11/2006	Westerman		2011/0130197	A1 6/2011 Bythar et al.
2006/0256868	A1	11/2006	Westerman		2011/0227287	A1 9/2011 Reabe
2006/0269120	A1	11/2006	Mehmadi et al.		2011/0269548	A1 11/2011 Barclay et al.
2006/0285586	A1	12/2006	Westerman		2011/0306428	A1 12/2011 Lockton et al.
2007/0004516	A1	1/2007	Jordan et al.		2012/0058808	A1 3/2012 Lockton
2007/0013547	A1	1/2007	Boaz		2012/0115585	A1 5/2012 Goldman
2007/0019826	A1	1/2007	Horbach et al.		2012/0157178	A1 6/2012 Lockton
2007/0028272	A1	2/2007	Lockton		2012/0264496	A1 10/2012 Behrman et al.
2007/0037623	A1	2/2007	Romik		2012/0282995	A1 11/2012 Allen et al.
2007/0054695	A1	3/2007	Huske et al.		2012/0295686	A1 11/2012 Lockton
2007/0078009	A1	4/2007	Lockton et al.		2013/0005453	A1 1/2013 Nguyen et al.
2007/0083920	A1	4/2007	Mizoguchi et al.		2013/0072271	A1 3/2013 Lockton et al.
2007/0086465	A1	4/2007	Paila et al.		2013/0079081	A1 3/2013 Lockton et al.
2007/0087832	A1	4/2007	Abbott		2013/0079092	A1 3/2013 Lockton et al.
2007/0093296	A1	4/2007	Asher		2013/0079093	A1 3/2013 Lockton et al.
2007/0106721	A1	5/2007	Schloter		2013/0079135	A1 3/2013 Lockton et al.
2007/0107010	A1	5/2007	Jolna et al.		2013/0079150	A1 3/2013 Lockton et al.
2007/0129144	A1	6/2007	Katz		2013/0079151	A1 3/2013 Lockton et al.
2007/0147870	A1	7/2007	Nagashima et al.		2013/0196774	A1 8/2013 Lockton et al.
2007/0162328	A1	7/2007	Reich		2013/0225285	A1 8/2013 Lockton
2007/0183744	A1	8/2007	Koizumi		2013/0225299	A1 8/2013 Lockton
2007/0197247	A1	8/2007	Inselberg		2014/0031134	A1 1/2014 Lockton et al.
2007/0210908	A1	9/2007	Putterman et al.		2014/0100011	A1 4/2014 Gingher
2007/0219856	A1	9/2007	Ahmad-Taylor		2014/0106832	A1 4/2014 Lockton et al.
2007/0222652	A1	9/2007	Cattone et al.		2014/0128139	A1 5/2014 Shuster et al.
2007/0226062	A1	9/2007	Hughes et al.		2014/0155130	A1 6/2014 Lockton et al.
2007/0238525	A1	10/2007	Suomela		2014/0155134	A1 6/2014 Lockton
2007/0243936	A1	10/2007	Binenstock et al.		2014/0206446	A1 7/2014 Lockton et al.
2007/0244570	A1	10/2007	Speiser et al.		2014/0237025	A1 8/2014 Huske et al.
2007/0244585	A1	10/2007	Speiser et al.		2014/0248952	A1 9/2014 Cibula et al.
2007/0244749	A1	10/2007	Speiser et al.		2014/0256432	A1 9/2014 Lockton et al.
2007/0265089	A1	11/2007	Robarts		2014/0279439	A1 9/2014 Brown
2007/0294410	A1	12/2007	Pandya		2014/0287832	A1 9/2014 Lockton et al.
2008/0005037	A1	1/2008	Hammad		2014/0309001	A1 10/2014 Root
2008/0013927	A1	1/2008	Kelly et al.		2014/0335961	A1 11/2014 Lockton et al.
2008/0051201	A1	2/2008	Lore		2014/0335962	A1 11/2014 Lockton et al.
2008/0066129	A1	3/2008	Katcher et al.		2014/0378212	A1 12/2014 Sims
2008/0076497	A1	3/2008	Kiskis et al.		2015/0011310	A1 1/2015 Lockton et al.
2008/0104630	A1	5/2008	Bruce		2015/0024814	A1 1/2015 Root
2008/0146337	A1	6/2008	Halonon		2015/0067732	A1 3/2015 Howe et al.
2008/0169605	A1	7/2008	Shuster et al.		2015/0148130	A1 5/2015 Cibula et al.
2008/0222672	A1	9/2008	Piesing		2015/0238839	A1 8/2015 Lockton
2008/0240681	A1	10/2008	Fukushima		2015/0238873	A1 8/2015 Arnone et al.
2008/0248865	A1	10/2008	Tedesco		2015/0258452	A1 9/2015 Lockton et al.
2008/0270288	A1	10/2008	Butterly et al.		2015/0356831	A1 12/2015 Osibodu
2008/0288600	A1	11/2008	Clark		2016/0023116	A1 1/2016 Wire
2008/0301741	A1	12/2008	Stern		2016/0045824	A1 2/2016 Lockton et al.
2008/0315521	A1	12/2008	Reabe, Jr.		2016/0049049	A1 2/2016 Lockton
2009/0011781	A1	1/2009	Merrill et al.		2016/0054872	A1 2/2016 Cibula et al.
2009/0094632	A1	4/2009	Newman et al.		2016/0082357	A1 3/2016 Lockton
2009/0103892	A1	4/2009	Hirayama		2016/0121208	A1 5/2016 Lockton et al.
2009/0119151	A1	5/2009	de Heer		2016/0134947	A1 5/2016 Huske et al.
2009/0186676	A1	7/2009	Amaitis et al.		2016/0217653	A1 7/2016 Meyer
2009/0163271	A1	9/2009	George et al.		2016/0220908	A1 8/2016 Isgreen
2009/0228351	A1	9/2009	Rijsenbrij		2016/0271501	A1 9/2016 Balsbaugh
2009/0234674	A1	9/2009	Wurster		2016/0361647	A1 12/2016 Lockton et al.
2009/0264188	A1	10/2009	Soukup		2016/0375362	A1 12/2016 Lockton et al.
2009/0271512	A1	10/2009	Jorgensen		2017/0036110	A1 2/2017 Lockton et al.
2009/0325716	A1	12/2009	Harari		2017/0036117	A1 2/2017 Lockton et al.
2010/0099421	A1	4/2010	Patel et al.		2017/0043259	A1 2/2017 Lockton et al.
2010/0099471	A1	4/2010	Feeney et al.		2017/0053498	A1 2/2017 Lockton
2010/0107194	A1	4/2010	McKissick et al.		2017/0065891	A1 3/2017 Lockton et al.
2010/0120503	A1	5/2010	Hoffman et al.		2017/0098348	A1 4/2017 Odom
2010/0137057	A1	6/2010	Fleming		2017/0103615	A1 4/2017 Theodosopoulos
2010/0203936	A1	8/2010	Levy		2017/0128840	A1 5/2017 Croci
2010/0261533	A1	10/2010	Kryger		2017/0221314	A1 8/2017 Lockton
2010/0279764	A1	11/2010	Allen et al.		2017/0225071	A1 8/2017 Lockton et al.
					2017/0225072	A1 8/2017 Lockton et al.
					2017/0232340	A1 8/2017 Lockton
					2017/0243438	A1 8/2017 Merati
					2017/0249801	A1 8/2017 Malek
					2017/0252649	A1 9/2017 Lockton et al.

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(56)

References Cited

U.S. PATENT DOCUMENTS

2017/0259173	A1	9/2017	Lockton et al.
2017/0264961	A1	9/2017	Lockton
2017/0282067	A1	10/2017	Lockton et al.
2017/0296916	A1	10/2017	Lockton et al.
2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0001213	A1	1/2018	Tsang
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov
2019/0295382	A1	9/2019	Huke
2019/0304259	A1	10/2019	Joao
2020/0111325	A1	4/2020	Lockton
2021/0043036	A1	2/2021	Katz
2021/0099759	A1	4/2021	Armstrong
2021/0136456	A1	5/2021	Srinivasan
2021/0142620	A1	5/2021	Platis
2021/0260476	A1	8/2021	Lockton

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102 A3	6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999
JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01039506 A2	5/2001
WO	01/65743 A1	9/2001
WO	02/03698 A1	10/2002
WO	2005064506 A1	7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007
WO	2007016575	2/2007
WO	2007041667	4/2007
WO	2008027811 A2	3/2008
WO	2008115858 A1	9/2008

OTHER PUBLICATIONS

"Modeling User Behavior in Networked Games by Tristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020, <http://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQSQS7M3GD>.

Gambling Commission, "Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcommission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.

Sipko et al., "Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from <http://www.winviewgames.com/press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.

The International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasy sport-Wikipedia.pdf, https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969 (Year 2015).

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

Ark 4.0 Standard Edition, Technical Overview www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.

"IST and Spotal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/st_spotal.html.

"Modeling User Behavior in Networked Games by Tristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6.html.

"On the Performance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE Inform '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1>.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

<http://help.yahoo.com/help/us/tourn/tourn-03.html>.

* cited by examiner

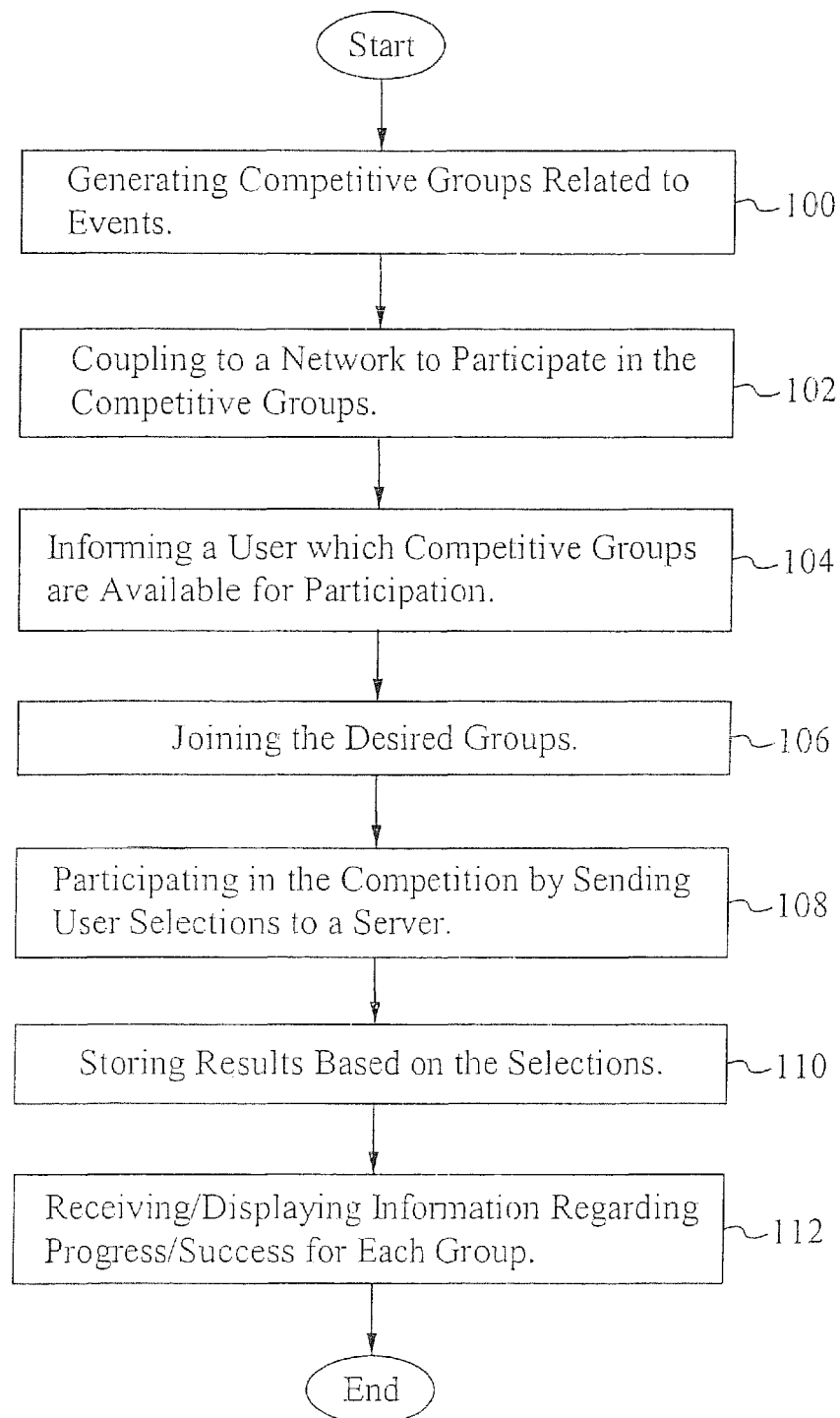


Fig. 1

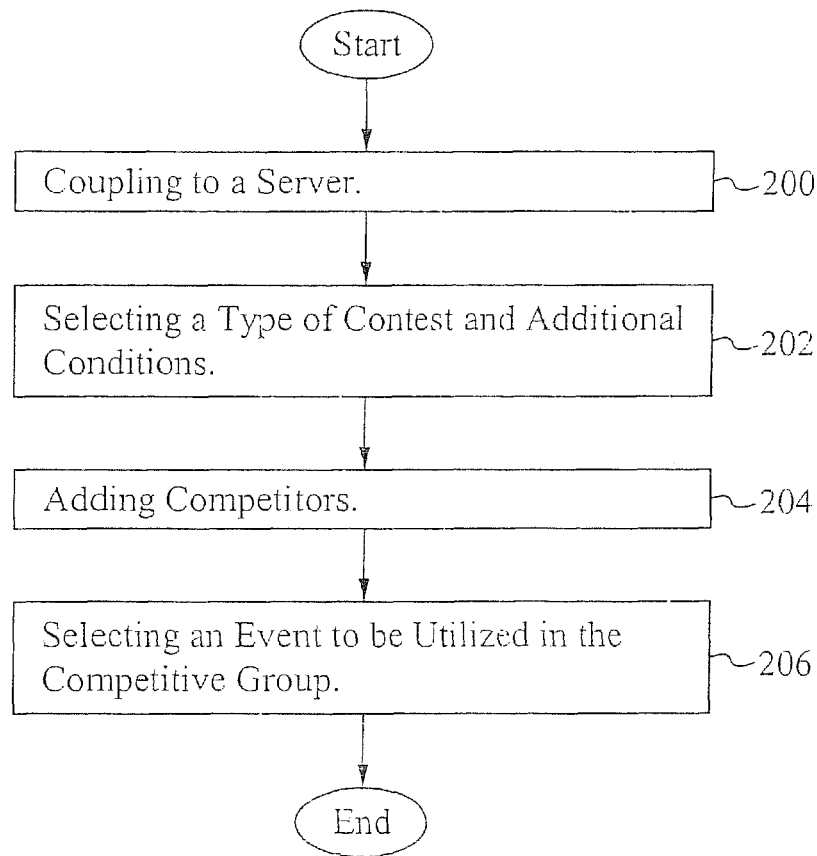


Fig. 2

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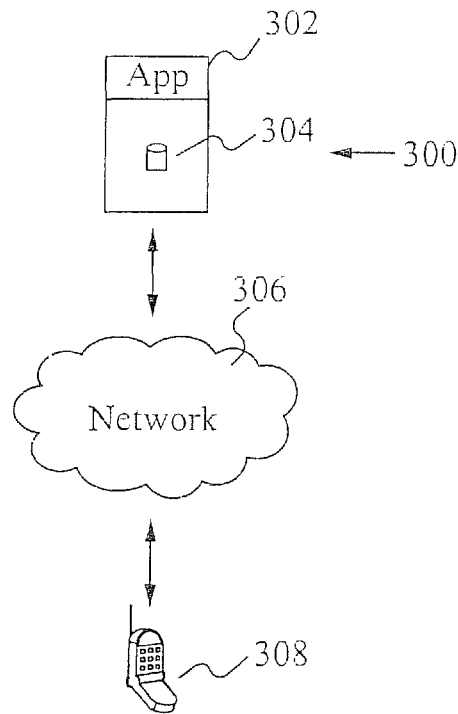


Fig. 3

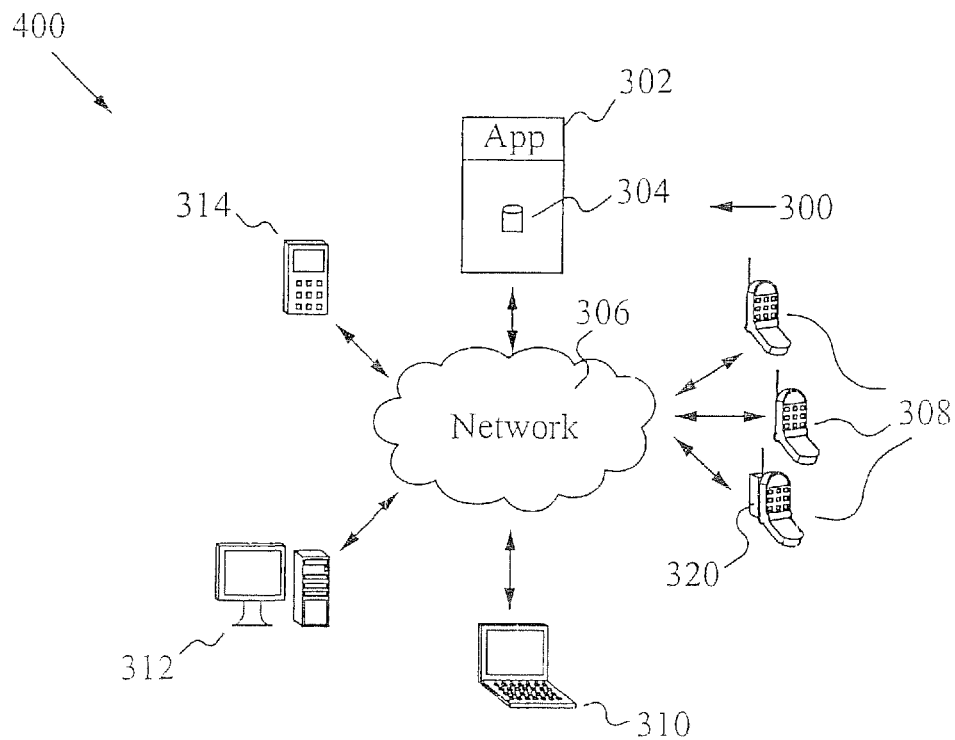


Fig. 4

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**METHOD OF AND SYSTEM FOR
CONDUCTING MULTIPLE CONTESTS OF
SKILL WITH A SINGLE PERFORMANCE**

RELATED APPLICATION(S)

This patent application is a continuation of co-pending U.S. patent application Ser. No. 16/934,886, filed on Jul. 21, 2020, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 16/426,788, filed on May 30, 2019, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 15/900,480, filed on Feb. 20, 2018, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of co-pending U.S. patent application Ser. No. 15/296,983, filed on Oct. 18, 2016, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/927,276, filed on Oct. 29, 2015, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/723,363, filed on May 27, 2015, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/044,173, filed on Oct. 2, 2013, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 13/215,052, filed on Aug. 22, 2011, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 11/652,240, filed on Jan. 10, 2007, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE", now issued as U.S. Pat. No. 8,002,618, which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/757,960, filed Jan. 10, 2006, and entitled "METHODOLOGY FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE," all of which are also hereby incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. In addition, games of skill with a

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common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

SUMMARY OF THE INVENTION

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of the availability of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated for each competition group, so that users continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

In one aspect, a method of participating in multiple contests of skill corresponding to an event comprises receiving a list of competitive groups to join, selecting a plurality of competitive groups to join, participating with the plurality of competitive groups by sending selections related to the

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single event to a server and receiving standings on a device from the server, wherein the standings are based on results from the selections. The event is selected from the group consisting of a television-based sporting event, entertainment programming and a game show. Alternatively, the event comprises identical classic card, dice, trivia and word games played simultaneously. Receiving the standings on the device with the plurality of competitive groups occurs during the event. The results are separated based on the plurality of competitive groups. The standings are received periodically and represent performance in the competitive groups. The competitive groups are selected from the service provider generated competitive groups and/or user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The list of competitive groups to join is received on the device selected from the user interface including a cellular phone, a laptop computer, a personal computer or a PDA. The competitive groups are maintained in a database. In some embodiments, the results include a handicap.

In another aspect, a method of conducting multiple contests of skill corresponding to an event comprises generating separate competitive groups related to the event, coupling to a network to participate in the competitive groups, informing a user which of the competitive groups are available for the user to join, joining a selected number of the competitive groups, participating with the competitive groups by sending selections related to the event to a server within the network, storing results and standings on the server, wherein the standings are based on the results and the results are based on the selections and transmitting the standings to a device. The method further comprises displaying the standings on the device. The server contains an application and a database for assisting in generating the competitive group. The application includes a graphical user interface. The device contains an application for assisting in generating the competitive group. Generating competitive groups related to the event further comprises coupling to the server, selecting a type of contest and additional conditions to be included in the competitive group, adding competitors to the competitive group and selecting the event for competition by the competitive group. The type of contest is selected from the group consisting of, for example, an open contest, a head-to-head contest and a team contest. Adding competitors to the competitive group includes identifying the competitors by an identifier selected from the group consisting of a username, an email address, a cellular phone number or other unique identifier. The method further comprises sending an invitation which informs the competitors of an opportunity to be included in the competitive group. The invitation is sent by a competitor or the service provider with a mechanism selected from the group consisting of an email, an SMS text message, a voice message or similar addressable communication. The event is selected from the group consisting of, for example, a television-based sporting event, entertainment programming and a game show. Alternatively, the event comprises identical classic card, dice, trivia and word games played simultaneously. Transmitting the standings with the competitive groups occurs during the event. The standings are separated for each of the competitive groups. The standings are received periodically and represent performance in the competitive groups. The competitive groups are selected from the service provider generated competitive groups and/or user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The device is selected from the group consisting of a cellular phone, a

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laptop computer, a personal computer and a PDA. The competitive groups are maintained in a database. In some embodiments, the results include a handicap.

In another embodiment, a system for conducting multiple contests of skill corresponding to an event comprises a device and a server coupled to the device through a network for storing competitive groups, receiving selections related to the event, storing results and standings based on the selections and transmitting the standings to the device. The server is further for providing an interface for generating competitive groups related to the event. The device contains an application for generating the competitive groups related to the event. The event is selected from the group consisting of a television-based sporting event, entertainment programming and a game show. Alternatively, the event comprises classic card, dice, trivia and word games played simultaneously. The device communicates data for generating the competitive groups, for selecting the competitive groups to join and for submitting the selections. The network includes at least one of the Internet and a cellular network. The standings are transmitted periodically to the device and represent performance in the competitive groups. The standings are separated for each of the competitive groups. The network identifies the competitive groups a user is eligible for. The system further comprises a database stored on the server for managing the selections, the results, the standings and the competitive groups. The device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer and a PDA. In some embodiments, the results include a handicap.

In yet another aspect, a network of devices for conducting multiple contests of skill corresponding to an event comprises a plurality of devices and a server within a network, wherein the server and the plurality of devices communicate to conduct the multiple contests of skill corresponding to the event. The plurality of devices are selected from the group consisting of cellular phones, laptop computers, personal computers and PDAs.

In another aspect, a server device for conducting multiple contests of skill corresponding to an event comprises a storage mechanism and an application for interacting with the storage mechanism and a communicating device to generate and store competitive groups which are used to compete in the multiple contests of skill. The storage mechanism is a database. The communicating device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer and a PDA. Interacting with the storage mechanism and the communicating device further includes receiving selections and transmitting standings.

In yet another aspect, a device for participating in multiple contests of skill corresponding to a single event comprises a communications module for coupling to a server and an application for utilizing the communications module for coupling to a server to communicate with the server to generate competitive groups which are used to compete in the multiple contests of skill. The application utilizes the communications module for coupling to the server to send selections to and receive standings from the server.

In yet another aspect, a device for participating in multiple simultaneous contests of skill corresponding to a single event comprises a storage module and an application stored within the storage module for simultaneously starting the multiple contests of skill and simultaneously scoring the multiple contests of skill. The application is downloaded from a server.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of a process of utilizing the present invention.

FIG. 2 illustrates a flowchart of a process of generating a user generated competition group.

FIG. 3 illustrates a graphical representation of an embodiment of the present invention.

FIG. 4 illustrates a graphical representation of a network of devices.

DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENT

A method and system for conducting a variety of competitions simultaneously are described herein. The organization of competition in a game of skill has previously taken one of three basic formats:

- 1) Open contests: where large numbers of players enter an event, and all of the entrants are competing against each other for a single prize pool.
- 2) Head-to-head: where competitors are matched between a relatively small number of players identified to compete head-to-head against each other. The actual match making occurs in many forms, such as match play or elimination tournaments.
- 3) Team competitions: where two or more people are teamed to compete in head-to-head elimination against other similar sized teams in match play or total score competitions.

The present invention is a system and method allowing participants to simultaneously compete in multiple contests based on a single performance. For example, a user is able to participate in an open contest, compete in a team competition, and also compete against a small group of friends all utilizing a score achieved in the same event.

As a comparison, in tournaments held for bowling or golf, players are able to compete simultaneously in a gross score tournament as well as a net (handicap) tournament with the same performance. However, the contestants in the gross and net competitions are identical. The focus of the present invention is on enabling the entry of an individual in separate competitions, with separate prizes based on their single performance (score), where the pool of entrants is different for each competition.

The default mechanism for organizing a competition for this type of game in the past has been an open contest where all competitors are automatically entered in a contest against all other players. As taught in U.S. Pat. No. 5,813,913, incorporated herein by reference, the competitive field of players is also able to be divided into separate flights or groups according to skill and experience and only scores from other competitions at the same skill level are compared. Thousands of players are able to compete in a particular football game within a particular skill level. In some embodiments, game data includes a lockout signal to prevent improper game inputs by participants. For example, a central computer system broadcasts a lockout signal to prevent improper game inputs by participants.

For this example, Player A has been rated as an "intermediate" player and is competing against 10,000 other "intermediate" players in an interactive game of skill played with a live Monday Night Football broadcast. Prior to the telecast, Player A has arranged a side competition against four of his friends. Player B has organized through a match-making interface, a small competition which includes Players A, B, C, D and E. In this example, Players A and B

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are intermediate players, but Players C, D and E are novice players. Player B has also organized this small competition to require a \$2.00 entry fee with a winner-takes-all rule. While none of the competitions require prizes or awards, they are allowable in games of skill.

When Player A logs on to a network supporting mobile games of skill, he is presented with the option of competing in the private separate contest that Player B set up. Player A agrees to compete with the \$2.00 entry fee.

Separately, Player A has previously registered to participate in a sponsored season long team competition with coworkers F, G and H. The highest two scores of their four man team are totaled, and these points are added to the season's cumulative score with the highest team scores winning prizes. Thus, for a single football game, Player A is registered in: an open competition where the best competitors win prizes, a friendly competition for a prize pool of \$10, and a season long team competition.

During the football game, Player A, like all of the other players, tries to get the best possible score by predicting the plays correctly before they happen. He plays in the same manner he would playing in the open contest alone, but his performance is in fact simultaneously separately scored in these completely different competitions against a different set of opponents for different rewards.

At the end of the event, Player A scored 12,565 points, in this example. That score was in the 92nd percentile among the 10,000 intermediate players, but not high enough to win an award in that contest. That same score of 12,565 was also compared against Players B, C, D and E, and was the highest score, so Player A won the separate competition of \$10. At the same time, Player A's score was the second highest among his team members in the separate team competition, and therefore was one which was totaled for the season long team competition.

It is essential to the success and enjoyment of such an invention that a potential competitor have an easy method of registering and entering these separate competitions on an ad hoc or seasonal basis. In addition, it is important to the success of such a system that all of the competitors be able to monitor periodically, not only their ongoing standings in the overall open competition at their skill level, but they will be able to periodically review all the competitions they are entered into to see the current standings.

For each of these competitions, there are two ways the group of attendees are able to be formed: A) organized by the service provider and/or a commercial sponsor or B) organized by the users themselves. Examples of service provider generated groups include those based on competitive skill level and region. For example, all intermediate players for a specific football game. An example of a user generated group is identifying five friends for a football competition. As each player enters a particular event (e.g. Monday Night Football), they are informed of the competitions they are playing in (e.g. Intermediate Global competition, the California Bay Area competition, and the personal Group competition). Each group is able to have a generic name and/or a specific name such as "personal group competition 1" or "Bob's Competition." When a player's phone or computing device establishes a connection with the network (e.g. the Airplay Network), the network identifies all of the groups that this player is able to compete in, and the server will upload this information to the phone over a cellular connection for display to the user. When a user couples to the network with a computing device other than a cellular phone, the information is available through the Internet. In some embodiments, participation in various group compe-

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titions involves additional fees. Users have the ability to choose not to compete in any or all of the groups they have been invited to.

There are two classes of Groups: System Generated Groups (e.g. Service Provider Groups) and User Generated Groups. System Generated Groups are generated by the service administrator based on database information about the user. Examples include Intermediate Skill Level and California Bay Area San Francisco 49ers Fans. User Generated Groups are defined by one or more members. A member is able to generate a group either from the services website or from a cellular phone interface. To generate a group, a member generates a name for the group or a generic name is assigned, and then the member adds other members to the group. The member is able to add other members to the group by their handle (unique identifier), email address (for new members) or by their cellular phone number. Groups are able to be assigned to a particular event. A group is able to be designated as an active group or a party. User group owners generate a party by associating the group to a particular event (e.g. December 12th Monday Night Football Game). In some embodiments, an email invitation or text message is sent to inform the members of the group that they have been invited to a party.

The game control server maintains a list of groups. Service Provider Groups are automatically assigned to events. User Groups are assigned to events by the group owners. In both cases, a list of active groups is known before the start of the event such as parties for a particular event. Within each of these known groups a list of all the participants is also maintained. This is able to be implemented in several ways. The most common way is via a database manager. This is able to be done through a data structure that is loaded for each event, and a database is one natural implementation to keep track of the group/participant relationships.

Throughout the game, a server manages the scores for every player. The scores are updated in a central location such as a database server, and are sorted with the members of a particular group to identify the rankings for each member in the competition.

During an event, scores and rankings are sent to members of the various groups. This is done after each scoring opportunity, or at a slower pace such as every five minutes or every five scoring opportunities. For small groups (e.g. 20 or less active participants) all of the scores and rankings are able to be sent by the server and displayed on the participant's device. For very large groups there are two approaches that can be taken: 1) Common message or 2) Individualized message. Sending a common message for large groups is much more efficient on the network, and is able to still provide a significant amount of information. The message is able to contain the top 20 names and scores for this group as well as the score that is required to be in the top 95%, 90%, 85%, . . . 5%. When the client receives this message, it determines what percentile the user is in by extrapolating its score between the percentile scores that the user is between. In sending an individual message for a large group, the server would still send the top 20 names and scores as well as the exact percentile that this user falls in.

Each separate tournament is managed effectively. A message is sent from the game server to the individual clients associated with each group. For very large groups, this message is able to be identical for all of those that are receiving the message. Past results tracked on the phone and in more detail on the website will track the rankings in each of the different groups associated with an event. A selection

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of pre-produced audio and visual comments, for example, in the nature of taunts and cheers are able to be selected from a menu and sent to a specific individual or to all competitors in the group.

Games of skill played on the Internet or cellular phones based upon live telecast sporting events or popular game shows are expected to attract a large number of potential competitors. As in all games of skill, there will be a wide variety of experience and talent and many motivations to play. To some, the enjoyment will be competing in open competitions against skilled players to test their medal. For others, it may be just the ability to compete and possibly win against a handful of close friends who share the same passion for the underlying televised event. Others may be more team oriented and derive more enjoyment from participating as a member of the group. The method and systems described herein provide not only the ability for an individual to find a group of competitors and a contest attractive to them, but also allows them to compete in multiple contests simultaneously with the identical performance and with the same investment of time. This increases not only the sense of community, but provides greater opportunities for the satisfaction of beating friends as well as winning prizes.

FIG. 1 illustrates a flowchart of a process of utilizing the present invention. In the step 100, competitive groups are generated related to events. The competitive groups are either system generated or user generated. As described above, a system generated group is generally based on skill level, location or another generic attribute that some users qualify for, while other users do not. A user generated group is selected by a user where participants are added to the group by entering a username, email address, cellular phone number, or another distinguishing identifier. User generated groups typically include groups of friends, co-workers and other groups of people that a user wants to compete with. Any number of system groups and user groups are able to be generated. In addition to determining who is included in the competition, the events being played within the competition are selected. For example, a user is able to set up a Monday Night Football league, wherein every Monday night for the regular season of the NFL, the users within the group compete based on the Monday night game. In some embodiments, the specific games that the users compete in are selected at later dates beyond the initial generation of the group.

In the step 102, users couple to a network (e.g. the Airplay Network) to participate in the generated competitions. In the step 104, the users are informed which competitions are available for participation. For example, an intermediate user couples to the network using his cellular phone and is greeted with a list of competitions available for him to join. The list includes, a free open competition for all intermediate players for a specified game, an individual group competition that his friend invited him to join also for the same specified game, a team competition that his co-workers wanted him to be a part of where it is a season long tournament which includes the same specified game and another system generated competition also for the same game that costs \$10 to enter with larger prizes available than the free competition. In the step 106, each user who has coupled to the network joins the groups desired. Continuing with the example above, the user decides to join the free open competition, the friend's competition and the co-worker competition but does not join the \$10 competition.

In the step 108, the users then participate in the competitions by sending user selections (e.g. predictions) to a

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server within the network for monitoring, analyzing and determining results based on the selections. Based on the results, standings for each competition are also determined. Using the example above again, although the user joined three different competitions related to a single game, the user competes exactly the same as if he entered in only one of the competitions, since his input is distributed for the three different competitions.

In the step 110, the results based on the users' selections are stored. The results are stored in a way such that they are easily retrieved for each competition. For example, a storing mechanism such as a database stores the results of Game X for Player A where Player A's score is 1000. In the free open competition, Player A's score was not good enough to win a prize. However, in the friendly competition, it was the highest score, and in the co-worker team competition it was a score usable by the team. Therefore, although the score was not a winning score for one competition, it was a beneficial score in the other two competitions. By competing in multiple competitions for the same game/event, a user's results/score could provide different outcomes depending on the competition. Therefore, the proper associations of each competition and the score are required.

In the step 112, each user receives the results and/or standings on his cellular phone or computer. The results and/or standings arrive at varying times depending on the setup of the system. The results and/or standings are received or at least accessible after the competition ends. If desired, the results and/or standings are also received throughout the competition such as every five minutes or after a certain number of selections are made. The standings from the results determine who wins at the end of the competition. While displayed during the game, the standings show what position the user is in. The standings are based on the results of the selections made by the users.

FIG. 2 illustrates a flowchart of a process of generating a user generated competition group. In the step 200, a user couples to a server within a network (e.g. the Airplay Network) storing an application to generate a competition group. In some embodiments, the application is stored on the user's cellular phone instead of or in addition to on the server. Preferably, the application provides a graphical user interface such as an interactive website for easily generating the competition group. In the step 202, the user selects the type of competition, such as open, head-to-head or team, in addition to other types of competitions. The user also adds any additional requirements or conditions such as intermediate players only or \$2 entry fee with the winner-take-all. Additionally, the user labels or names the competition group. In the step 204, competitors are added to the competition. The competitors are added based on a username, phone number, email address or another identification mechanism. In the step 206, either at the initial set up of the competition group or later on, one or more events are selected to be competed in. For example, if a user wants to set up a competition specifically for Super Bowl XLI, he is able to designate that immediately. Or if a user wants to start a week-long competition related to Jeopardy, he is able to do that as well. The user is also able to retain the same group and modify it to generate a second competition. For example, after the Super Bowl XLI competition ends, the user is able to generate another competition with the same group for the NCAA BCS Bowl Championship Game. Users are able to generate as basic or as complex a competition group as desired. As described above, it is able to be for a single event, a variety of events or an entire season of events.

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Preferably, a database is utilized to organize the competition groups for easy correlation of data.

FIG. 3 illustrates a graphical representation of an embodiment of the present invention. A server 300 contains an application 302 and a storage mechanism 304. The application 302 is preferably a web application or at least has a web component to enable users to interact with a web graphical user interface to input data and review data. The storage mechanism 304 is utilized for storing selections and results from the selections as well as competition groups. The storage mechanism 304 preferably includes a database for organizing the data including the selections, results, standings and competition groups amongst other data needed for executing the competitions. The server 300 is part of a network 306. A device 308 couples to the server 300 through the network 306. In some embodiments the network 306 includes the Internet. In some embodiments, the network 306 includes a cellular network. Also, in some embodiments, the network 306 includes both the Internet and a cellular network. The device 308 is selected from a cellular phone, a PDA, a computer, a laptop or any other device capable of communicating with the server 300. As described above, in some embodiments, an application for allowing users to generate competition groups, input selections and communicate with the server in general is included in the device 308 instead of or in addition to the application 302 on the server 300.

FIG. 4 illustrates a graphical representation of a network of devices. As described above, the server 300 contains the application 302 and the storage mechanism 304 for inputting and outputting data related to the competitions. The device 308, couples to the network through a network 306. As described above, the network includes either the Internet, a cellular network or both. Although the device 308 is able to be a device other than a cellular phone as shown, other devices are also shown coupled to the network 306 therefore forming a network of devices 400. The other devices include a laptop 310, a computer 312 and a PDA 314. One of the devices 308 is shown with an application 320 for enabling the user to generate competition groups and communicate with the server 300.

In some embodiments, handicaps are implemented so that users of different levels are able to compete more fairly. Handicaps provide additional points to users at lower levels so their score is comparable to a more advanced user. The handicaps are determined based on analysis of the scoring. For example, if advanced users on average score 3000, while intermediate users on average score 2000 and beginners on average score 1000 for the same set of questions, then a fair handicap is 1000 per difference in level. Thus, when there is a friendly competition between one user who is advanced by playing every week and three beginner users who play once a month just for fun, a straight game without handicaps is not likely going to be a close competition. However, if the beginner users are given help to put them on par with the advanced user, then the outcome of the competition could result in a beginner user winning.

In some embodiments, each user competes in the same game, but slightly different sets of questions/choices are posed based on the competition level. For example, an intermediate user chooses to play in an open intermediate competition and also with a group of beginner friends. Each of the beginner users is asked to choose what type of play the following play is going to be (e.g. Run or Pass). The intermediate user is also asked to choose the following play. However, the intermediate user is also asked to choose which direction the play will go (e.g. Left or Right). There-

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fore, the same game is being played to some extent, but there is a slight modification, so that more advanced users have additional options. However, when scoring, the additional options apply only across the same level. Thus, the user selecting Left or Right correctly has no effect on the scoring in the beginner competition. It only affects scoring for the intermediate competition. Thus, users are able to compete at different levels for the same event.

To utilize the present invention, users select from or generate competition groups to participate in. The users select system generated competition groups which are specific to levels, geographic locations and other general categories. The users are also able to generate their own competition groups which include friends, family, co-workers or other groups of people they choose. After the competition groups are generated, users are able to join whichever group they are invited to. After joining one or more groups, the users are able to join additional groups beyond that as they are generated and become available to the user. A user is informed of the competition groups available for entering either by email, Short Message Service (SMS) text message, voice message or when the user couples to the network to view/play competitions. After joining the desired competition groups, the user participates in the competitions by answering questions or making selections based on viewing a sporting event, television show, game show or other event where skill is involved in making choices. In addition, games of skill with a common start time can be conducted simultaneously in real-time, based on classic card, dice, trivia, word and other games. The selections/answers/predictions are stored and results and/or standings are sent to the user. The results and/or standings throughout the competition show how well the user is doing compared to other competitors via standings, and when the competition is over, the results and/or standings determine who the winner is. Additionally, since multiple competitions are occurring based on a single event, the results and standings are organized so that the user is able to understand how he is doing in each event. For example, if a user is winning by a lot in his two friendly competitions, but is slightly out of prize position in the open competition, he will not simply relax and coast to victory in his friendly competitions. He is able to realize that by performing slightly better, he still has a chance to win a prize in the open competition, while still winning easily in the friendly competitions.

In operation, the present invention allows users to set up and compete in multiple competitions for a single event. Although users are competing against typically different competitors in different competition groups, the same selections are utilized to produce scores that have specific meaning based on the competition group. As described above, a user may lose in one competition group but win in another competition group because the competitors are different. Also, the requirements of each group are different as well. For example, in team play, if the top two scores are counted and the user has one of the top two scores, then his score is important even though he lost in a different competition group. In another example, the competition group is a season long event where there is no weekly winner, but only a year-end winner. Thus, although the competitor is doing terrible one week and has no chance of winning the separate weekly competition, the user is still encouraged to do as well as possible for the year-end total. By allowing users to compete in multiple competition groups for the same event, the user interaction increases substantially. For example, instead of a user simply playing his standard weekly intermediate football competition, the user is also invited to play

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in his family's tournament for bragging rights, his friend's competition where the winner gets \$20 and his co-worker's competition where the lowest score pays for a round of drinks the following Friday. With more chances to win, users have a much more vested interest in competing. To ensure users do not get frustrated with the scoring, the results and/or standings are displayed in a very user-friendly format so that a user knows how well he is doing in each respective competition.

In some embodiments, multiple servers are used within the network. For example, one server is dedicated for the scoring, a separate server is dedicated for the database and another server is dedicated for hosting the graphical user interface.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method, programmed in a memory of a device, of participating in a plurality of competitive groups, each comprising a plurality of competitors and corresponding to one or more events, the method comprising:

determining, with the device, a physical location of a user and eligibility of the user to participate in the plurality of competitive groups based on the physical location of the user;

receiving, with the device, one or more event selections by the user related to the one or more events prior to the beginning of a first event of the one or more events, wherein the one or more event selections enable the user to participate in the plurality of competitive groups; and

triggering, on the device, a lockout signal preventing further additional user input.

2. The method as claimed in claim 1 wherein the one or more events are selected from the group consisting of a live television-based event, a recorded television event, a scheduled competition, a scheduled series of competitions, a sporting event, an event based on a video game, computer game, mobile game or electronic game conducted in real time, an entertainment show, a game show, a reality show and a news show.

3. A server device for conducting multiple contests each comprising a plurality of competitors and corresponding to one or more events, the server device comprising:

a memory configured for:

determining a physical location of a user and eligibility of the user to participate in a plurality of competitive groups based on the physical location of the user;

receiving one or more event selections by the user related to the one or more events; and

triggering a lockout signal preventing further additional user input; and

a processor configured for processing the multiple contests corresponding to the one or more events, wherein processing the multiple contests is based on the one or more event selections for the user which enables the user to participate in the plurality of competitive groups, wherein the server device presents standings

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and results related to the event selections, wherein the standings in each of the plurality of competitive groups are based on the results.

4. A device for participating in multiple contests each comprising a plurality of competitors and corresponding to one or more events, the device comprising:

a communications module for coupling to a server; and an application for utilizing the communications module for coupling to a server to communicate with the server determine which competitive groups a user is eligible to complete in which are used to compete in the multiple contests wherein the application enables an individual user to join a plurality of competitive groups for the one or more events, wherein the application is configured for:

determining a physical location of a user and eligibility of the user to participate in the plurality of competitive groups based on the physical location of the user;

receiving one or more event selections by the user related to the one or more events prior to the beginning of the first one of the one or more events, wherein the one or more event selections enable the user to participate in the plurality of competitive groups; and

triggering a lockout signal preventing further additional user input.

5. The device as claimed in claim 4 wherein the application utilizes the communications module for coupling to the server to send selections to and receive standings from the server.

6. The method as claimed in claim 1 wherein the one or more events are one or more live events.

7. The method as claimed in claim 1 wherein the one or more events comprise multiple events over a period of time of a same sport.

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8. The method as claimed in claim 1 wherein the lockout signal occurs immediately before competitors in the competitive groups are able to see or hear relevant live action unfold.

9. The method as claimed in claim 1 wherein the lockout signal is triggered based on a countdown time presented simultaneously to all competitors.

10. The server device as claimed in claim 3 wherein the one or more events are one or more live events.

11. The server device as claimed in claim 3 wherein the one or more events comprise multiple events over a period of time of a same sport.

12. The server device as claimed in claim 3 wherein the lockout signal occurs immediately before competitors in the contests are able to see or hear relevant live action unfold.

13. The server device as claimed in claim 3 wherein the lockout signal is triggered based on a countdown time presented simultaneously to all competitors.

14. The server device as claimed in claim 3 wherein the one or more events comprise classic games of skill including card, dice, trivia and word games played simultaneously.

15. The device as claimed in claim 4 wherein the one or more events are one or more live events.

16. The device as claimed in claim 4 wherein the one or more events comprise multiple events over a period of time of a same sport.

17. The device as claimed in claim 4 wherein the lockout signal occurs immediately before competitors in the contests are able to see or hear relevant live action unfold.

18. The device as claimed in claim 4 wherein the lockout signal is triggered based on a countdown time presented simultaneously to all competitors.

19. The device as claimed in claim 4 wherein the one or more events comprise classic games of skill including card, dice, trivia and word games played simultaneously.

* * * * *

Exhibit 9

US012005349B2

(12) **United States Patent**
Lockton

(10) **Patent No.:** **US 12,005,349 B2**

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(54) **SYNCHRONIZED GAMING AND PROGRAMMING**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

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This patent is subject to a terminal disclaimer.

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(58) **Field of Classification Search**

None

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,010,516 A 8/1935 Hoffmann
2,051,615 A 8/1936 Miles
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020, <http://www.pinnacle.com/en/betting-articles/educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD>.

(Continued)

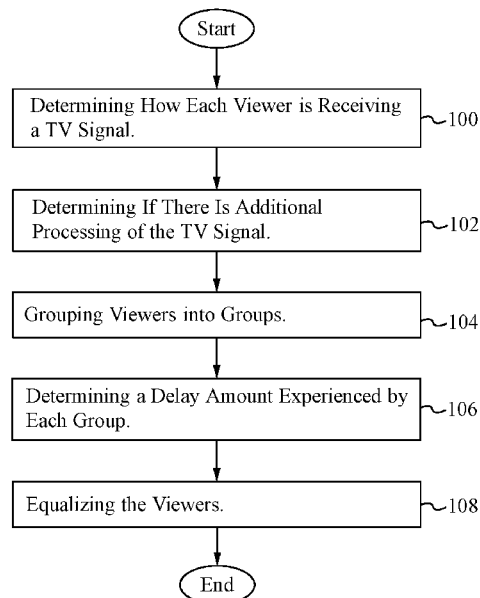
Primary Examiner — Peter J Iannuzzi

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(57) **ABSTRACT**

To encourage viewer participation, games, contests and social interactions are able to be synchronized with programming such as television shows or commercials utilizing a second screen such as a cell phone, iPad® or laptop computer. The programming is able to be television programming, Internet programming (e.g. a video displayed on a webpage or mobile device) or any other programming. The gaming is able to be any game such as a game of skill or chance, for example, a scavenger hunt or a treasure hunt.

41 Claims, 7 Drawing Sheets



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Related U.S. Application Data

- continuation of application No. 15/886,704, filed on Feb. 1, 2018, now Pat. No. 10,653,955, which is a continuation of application No. 15/586,198, filed on May 3, 2017, now Pat. No. 9,919,210, which is a continuation-in-part of application No. 15/332,625, filed on Oct. 24, 2016, now Pat. No. 10,137,369, and a continuation-in-part of application No. 14/172,539, filed on Feb. 4, 2014, now Pat. No. 9,672,692, which is a division of application No. 13/484,129, filed on May 30, 2012, now Pat. No. 8,705,195, which is a continuation-in-part of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530, said application No. 15/332,625 is a continuation of application No. 11/542,335, filed on Oct. 2, 2006.
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- (56) **References Cited**
- U.S. PATENT DOCUMENTS
- | | | | | | | | |
|-----------|---|---------|-------------------|-----------|----|---------|-------------------|
| 2,193,638 | A | 3/1940 | Morton | 5,488,659 | A | 1/1996 | Millani |
| 2,274,933 | A | 3/1942 | Peck | 5,519,433 | A | 5/1996 | Lappington |
| 2,831,105 | A | 4/1958 | Parker | 5,530,483 | A | 6/1996 | Cooper |
| 3,550,944 | A | 12/1970 | Chamberlin | 5,553,120 | A | 9/1996 | Katz |
| 3,562,650 | A | 2/1971 | Gossard et al. | 5,566,291 | A | 10/1996 | Boulton et al. |
| 3,689,071 | A | 9/1972 | Kucera | 5,585,975 | A | 12/1996 | Bliss |
| 4,141,548 | A | 2/1979 | Everton | 5,586,257 | A | 12/1996 | Perlman |
| 4,270,755 | A | 6/1981 | Willhide et al. | 5,589,765 | A | 12/1996 | Ohmart et al. |
| 4,386,377 | A | 5/1983 | Hunter, Jr. | 5,594,938 | A | 1/1997 | Engel |
| 4,496,148 | A | 1/1985 | Morstain et al. | 5,618,232 | A | 4/1997 | Martin |
| 4,521,803 | A | 6/1985 | Glittinger | 5,628,684 | A | 5/1997 | Jean-Etienne |
| 4,592,546 | A | 6/1986 | Fascenda et al. | 5,636,920 | A | 6/1997 | Shur et al. |
| 4,816,904 | A | 3/1989 | McKenna et al. | 5,638,113 | A | 6/1997 | Lappington |
| 4,918,603 | A | 4/1990 | Hughes et al. | 5,643,088 | A | 7/1997 | Vaughn et al. |
| 4,930,010 | A | 5/1990 | MacDonald | 5,663,757 | A | 9/1997 | Morales |
| 5,013,038 | A | 5/1991 | Luvenberg | 5,711,715 | A | 1/1998 | Ringo |
| 5,018,736 | A | 5/1991 | Pearson et al. | 5,759,101 | A | 6/1998 | Won Kohorn |
| 5,035,422 | A | 7/1991 | Berman | 5,761,606 | A | 6/1998 | Wolzien |
| 5,073,931 | A | 12/1991 | Audebert et al. | 5,762,552 | A | 6/1998 | Young et al. |
| 5,083,271 | A | 1/1992 | Thatcher et al. | 5,764,275 | A | 6/1998 | Lappington et al. |
| 5,083,800 | A | 1/1992 | Lockton | 5,794,210 | A | 8/1998 | Goldhaber et al. |
| 5,119,295 | A | 6/1992 | Kapur | 5,805,230 | A | 9/1998 | Staron |
| 5,120,076 | A | 6/1992 | Luxenberg et al. | 5,813,913 | A | 9/1998 | Berner et al. |
| 5,213,337 | A | 5/1993 | Sherman | 5,818,438 | A | 10/1998 | Howe et al. |
| 5,227,874 | A | 7/1993 | Von Kohorn | 5,828,843 | A | 10/1998 | Grimm |
| 5,256,863 | A | 10/1993 | Ferguson | 5,838,774 | A | 11/1998 | Weiser, Jr. |
| 5,263,723 | A | 11/1993 | Pearson et al. | 5,838,909 | A | 11/1998 | Roy |
| 5,283,734 | A | 2/1994 | Von Kohorn | 5,846,132 | A | 12/1998 | Junkin |
| 5,327,485 | A | 7/1994 | Leaden | 5,848,397 | A | 12/1998 | Marsh et al. |
| 5,343,236 | A | 8/1994 | Koppe et al. | 5,860,862 | A | 1/1999 | Junkin |
| 5,343,239 | A | 8/1994 | Lappington et al. | 5,882,260 | A | 3/1999 | Marks |
| 5,417,424 | A | 5/1995 | Snowden | 5,894,556 | A | 4/1999 | Grimm |
| 5,462,275 | A | 10/1995 | Lowe et al. | 5,916,024 | A | 6/1999 | Von Kohorn |
| 5,479,492 | A | 12/1995 | Hofstee et al. | 5,870,683 | A | 9/1999 | Wells et al. |
| | | | | 5,970,143 | A | 10/1999 | Schneier et al. |
| | | | | 5,971,854 | A | 10/1999 | Pearson et al. |
| | | | | 5,987,440 | A | 11/1999 | O'Neil et al. |
| | | | | 6,009,458 | A | 12/1999 | Hawkins et al. |
| | | | | 6,015,344 | A | 1/2000 | Kelly et al. |
| | | | | 6,016,337 | A | 1/2000 | Pykalisto |
| | | | | 6,038,599 | A | 3/2000 | Black |
| | | | | 6,042,477 | A | 3/2000 | Addink |
| | | | | 6,064,449 | A | 5/2000 | White |
| | | | | 6,104,815 | A | 8/2000 | Alcorn et al. |
| | | | | 6,110,041 | A | 8/2000 | Walker et al. |
| | | | | 6,117,013 | A | 9/2000 | Elba |
| | | | | 6,126,543 | A | 10/2000 | Friedman |
| | | | | 6,128,660 | A | 10/2000 | Grimm |
| | | | | 6,135,881 | A | 10/2000 | Abbott et al. |
| | | | | 6,154,131 | A | 11/2000 | Jones, II |
| | | | | 6,174,237 | B1 | 1/2001 | Stephenson |
| | | | | 6,182,084 | B1 | 1/2001 | Cockrell et al. |
| | | | | 6,193,610 | B1 | 2/2001 | Junkin |
| | | | | 6,222,642 | B1 | 4/2001 | Farrell et al. |
| | | | | 6,233,736 | B1 | 5/2001 | Wolzien |
| | | | | 6,251,017 | B1 | 6/2001 | Leason et al. |
| | | | | 6,264,650 | B1 | 7/2001 | Goldberg |
| | | | | 6,267,670 | B1 | 7/2001 | Walker |
| | | | | 6,287,199 | B1 | 9/2001 | McKeown et al. |
| | | | | 6,293,868 | B1 | 9/2001 | Bernard |
| | | | | 6,312,336 | B1 | 11/2001 | Handelman et al. |
| | | | | 6,343,320 | B1 | 1/2002 | Fairchild |
| | | | | 6,345,297 | B1 | 2/2002 | Grimm |
| | | | | 6,371,855 | B1 | 4/2002 | Gavriloff |
| | | | | 6,373,462 | B1 | 4/2002 | Pan |
| | | | | 6,411,969 | B1 | 6/2002 | Tam |
| | | | | 6,416,414 | B1 | 7/2002 | Stadelmann |
| | | | | 6,418,298 | B1 | 7/2002 | Sonnenfeld |
| | | | | 6,425,828 | B2 | 7/2002 | Walker et al. |
| | | | | 6,434,398 | B1 | 8/2002 | Inselberg |
| | | | | 6,446,262 | B1 | 9/2002 | Malaure et al. |
| | | | | 6,470,180 | B1 | 10/2002 | Kotzin et al. |
| | | | | 6,475,090 | B2 | 11/2002 | Gregory |
| | | | | 6,524,189 | B1 | 2/2003 | Rautila |
| | | | | 6,527,641 | B1 | 3/2003 | Sinclair et al. |
| | | | | 6,530,082 | B1 | 3/2003 | Del Sesto et al. |
| | | | | 6,536,037 | B1 | 3/2003 | Guheen et al. |
| | | | | 6,537,150 | B1 | 3/2003 | Luciano |
| | | | | 6,578,068 | B1 | 6/2003 | Bowma-Amuah |

US 12,005,349 B2

Page 3

(56)

References Cited

U.S. PATENT DOCUMENTS

6,594,098 B1	7/2003	Sutardja	7,249,367 B2	7/2007	Bove, Jr. et al.
6,604,997 B2	7/2003	Saidakovsky et al.	7,254,605 B1	8/2007	Strum
6,610,953 B1	8/2003	Tao et al.	7,260,782 B2	8/2007	Wallace et al.
6,611,755 B1	8/2003	Coffee	RE39,818 E	9/2007	Slifer
6,648,760 B1	11/2003	Nicastro	7,283,830 B2	10/2007	Buckley
6,659,860 B1	12/2003	Yamamoto et al.	7,288,027 B2	10/2007	Overton
6,659,861 B1	12/2003	Faris	7,341,517 B2	3/2008	Asher et al.
6,659,872 B1	12/2003	Kaufman et al.	7,343,617 B1	3/2008	Kartcher et al.
6,690,661 B1	2/2004	Agarwal et al.	7,347,781 B2	3/2008	Schultz
6,697,869 B1	2/2004	Mallart	7,351,149 B1	4/2008	Simon et al.
6,718,350 B1	4/2004	Karbowski	7,367,042 B1	4/2008	Dakss et al.
6,752,396 B2	6/2004	Smith	7,379,705 B1	5/2008	Rados et al.
6,758,754 B1	7/2004	Lavanchy et al.	7,389,144 B1	6/2008	Osorio
6,758,755 B2	7/2004	Kelly et al.	7,430,718 B2	9/2008	Garipey-Viles
6,760,595 B2	7/2004	Insellberg	7,452,273 B2	11/2008	Amaitis et al.
6,763,377 B1	7/2004	Balknap et al.	7,460,037 B2	12/2008	Cattone et al.
6,766,524 B1	7/2004	Matheny et al.	7,461,067 B2	12/2008	Dewing et al.
6,774,926 B1	8/2004	Ellis et al.	7,502,610 B2	3/2009	Maher
6,785,561 B1	8/2004	Kim	7,510,474 B2	3/2009	Carter, Sr.
6,801,380 B1	10/2004	Saturdja	7,517,282 B1	4/2009	Pryor
6,806,889 B1	10/2004	Malaure et al.	7,534,169 B2	5/2009	Amaitis et al.
6,807,675 B1	10/2004	Millard et al.	7,543,052 B1	6/2009	Cesa Klein
6,811,482 B2	11/2004	Letovsky	7,562,134 B1	7/2009	Fingerhut et al.
6,811,487 B2	11/2004	Sengoku	7,602,808 B2	10/2009	Ullmann
6,816,628 B1	11/2004	Sarachik et al.	7,610,330 B1	10/2009	Quinn
6,817,947 B2	11/2004	Tanskanen	7,614,944 B1	11/2009	Hughes et al.
6,824,469 B2	11/2004	Allibhoy et al.	7,630,986 B1	12/2009	Herz et al.
6,837,789 B2	1/2005	Garahi et al.	7,693,781 B2	4/2010	Asher et al.
6,837,791 B1	1/2005	McNutt et al.	7,699,707 B2	4/2010	Bahou
6,840,861 B2	1/2005	Jordan et al.	7,702,723 B2	4/2010	Dyl
6,845,389 B1	1/2005	Sen	7,711,628 B2	5/2010	Davie et al.
6,846,239 B2	1/2005	Washio	7,729,286 B2	6/2010	Mishra
6,857,122 B1	2/2005	Takeda et al.	7,753,772 B1	7/2010	Walker
6,863,610 B2	3/2005	Vancraeynest	7,753,789 B2	7/2010	Walker et al.
6,870,720 B2	3/2005	Iwata et al.	7,780,528 B2	8/2010	Hirayama
6,871,226 B1	3/2005	Ensley et al.	7,828,661 B1	11/2010	Fish
6,873,610 B1	3/2005	Noever	7,835,961 B2	11/2010	Davie et al.
6,884,166 B2	4/2005	Leen et al.	7,860,993 B2	12/2010	Chintala
6,884,172 B1	4/2005	Lloyd et al.	7,886,003 B2	2/2011	Newman
6,887,159 B2	5/2005	Leen et al.	7,907,211 B2	3/2011	Oostveen et al.
6,888,929 B1	5/2005	Saylor	7,907,598 B2	3/2011	Anisimov
6,893,347 B1	5/2005	Zilliacus et al.	7,909,332 B2	3/2011	Root
6,898,762 B2	5/2005	Ellis et al.	7,925,756 B1	4/2011	Riddle
6,899,628 B2	5/2005	Leen et al.	7,926,810 B2	4/2011	Fisher et al.
6,903,681 B2	6/2005	Faris	7,937,318 B2	5/2011	Davie et al.
6,908,389 B1	6/2005	Puskala	7,941,482 B2	5/2011	Bates
6,942,574 B1	9/2005	LeMay et al.	7,941,804 B1	5/2011	Herington
6,944,228 B1	9/2005	Dakss et al.	7,976,389 B2	7/2011	Cannon et al.
6,960,088 B1	11/2005	Long	8,002,618 B1	8/2011	Lockton et al.
6,978,053 B1	12/2005	Sarachik et al.	8,006,314 B2	8/2011	Wold
7,001,279 B1	2/2006	Barber et al.	8,025,565 B2	9/2011	Leen et al.
7,029,394 B2	4/2006	Leen et al.	8,028,315 B1	9/2011	Barber
7,035,626 B1	4/2006	Luciano, Jr.	8,082,150 B2	12/2011	Wold
7,035,653 B2	4/2006	Simon et al.	8,086,445 B2	12/2011	Wold et al.
7,058,592 B1	6/2006	Heckerman et al.	8,086,510 B2	12/2011	Amaitis et al.
7,076,434 B1	7/2006	Newman et al.	8,092,303 B2	1/2012	Amaitis et al.
7,085,552 B2	8/2006	Buckley	8,092,306 B2	1/2012	Root
7,116,310 B1	10/2006	Evans et al.	8,105,141 B2	1/2012	Leen et al.
7,117,517 B1	10/2006	Milazzo et al.	8,107,674 B2	1/2012	Davis et al.
7,120,924 B1	10/2006	Katcher et al.	8,109,827 B2	2/2012	Cahill et al.
7,124,410 B2	10/2006	Berg	8,128,474 B2	3/2012	Amaitis et al.
7,125,336 B2	10/2006	Anttila et al.	8,147,313 B2	4/2012	Amaitis et al.
7,136,871 B2	11/2006	Ozer et al.	8,147,373 B2	4/2012	Amaitis et al.
7,144,011 B2	12/2006	Asher et al.	8,149,530 B1	4/2012	Lockton et al.
7,169,050 B1	1/2007	Tyler	8,155,637 B2	4/2012	Fujisawa
7,185,355 B1	2/2007	Ellis	8,162,759 B2	4/2012	Yamaguchi
7,187,658 B2	3/2007	Koyanagi	8,176,518 B1	5/2012	Junkin et al.
7,191,447 B1	3/2007	Ellis et al.	8,186,682 B2	5/2012	Amaitis et al.
7,192,352 B2	3/2007	Walker et al.	8,204,808 B2	6/2012	Amaitis et al.
7,194,758 B1	3/2007	Waki et al.	8,219,617 B2	7/2012	Ashida
7,228,349 B2	6/2007	Barone, Jr. et al.	8,240,669 B2	8/2012	Asher
7,231,630 B2	6/2007	Acott et al.	8,246,048 B2	8/2012	Amaitis et al.
7,233,922 B2	6/2007	Asher et al.	8,267,403 B2	9/2012	Fisher et al.
7,240,093 B1	7/2007	Danieli et al.	8,342,924 B2	1/2013	Leen et al.
7,244,181 B2	7/2007	Wang et al.	8,342,942 B2	1/2013	Amaitis et al.
			8,353,763 B2	1/2013	Amaitis et al.
			8,376,855 B2	2/2013	Lockton et al.
			8,396,001 B2	3/2013	Jung
			8,397,257 B1	3/2013	Barber

US 12,005,349 B2

Page 4

(56)	References Cited					
	U.S. PATENT DOCUMENTS					
	8,465,021 B2	6/2013	Asher et al.	9,821,233 B2	11/2017	Lockton et al.
	8,473,393 B2	6/2013	Davie et al.	9,878,243 B2	1/2018	Lockton et al.
	8,474,819 B2	7/2013	Asher et al.	9,881,337 B2	1/2018	Jaycob et al.
	8,535,138 B2	9/2013	Amaitis et al.	9,901,820 B2	2/2018	Lockton et al.
	8,538,563 B1	9/2013	Barber	9,908,053 B2	3/2018	Lockton et al.
	8,543,487 B2	9/2013	Asher et al.	9,919,210 B2	3/2018	Lockton
	8,555,313 B2	10/2013	Newman	9,919,211 B2	3/2018	Lockton et al.
	8,556,691 B2	10/2013	Leen et al.	9,919,221 B2	3/2018	Lockton et al.
	8,585,490 B2	11/2013	Amaitis et al.	9,978,217 B2	5/2018	Lockton
	8,597,117 B2	12/2013	Bruce	9,993,730 B2	6/2018	Lockton et al.
	8,622,798 B2	1/2014	Lockton et al.	9,999,834 B2	6/2018	Lockton et al.
	8,632,392 B2	1/2014	Shore et al.	10,052,557 B2	8/2018	Lockton et al.
	8,634,943 B2	1/2014	Root	10,089,815 B2	10/2018	Asher et al.
	8,638,517 B2	1/2014	Lockton et al.	10,096,210 B2	10/2018	Amaitis et al.
	8,641,511 B2	2/2014	Ginsberg et al.	10,137,369 B2	11/2018	Lockton et al.
	8,659,848 B2	2/2014	Lockton et al.	10,150,031 B2	12/2018	Lockton et al.
	8,672,751 B2	3/2014	Leen et al.	10,165,339 B2	12/2018	Huske et al.
	8,699,168 B2	4/2014	Lockton et al.	10,186,116 B2	1/2019	Lockton
	8,705,195 B2 *	4/2014	Lockton H04L 65/611 381/103	10,195,526 B2	2/2019	Lockton et al.
	8,708,789 B2	4/2014	Asher et al.	10,226,698 B1	3/2019	Lockton et al.
	8,717,701 B2	5/2014	Lockton et al.	10,226,705 B2	3/2019	Lockton et al.
	8,727,352 B2	5/2014	Amaitis et al.	10,232,270 B2	3/2019	Lockton et al.
	8,734,227 B2	5/2014	Leen et al.	10,248,290 B2	4/2019	Galfond
	8,737,004 B2	5/2014	Lockton et al.	10,279,253 B2	5/2019	Lockton
	8,738,694 B2	5/2014	Huske et al.	10,360,767 B2	7/2019	Russell et al.
	8,771,058 B2	7/2014	Alderucci et al.	10,569,175 B2	2/2020	Kosai et al.
	8,780,482 B2	7/2014	Lockton et al.	10,653,955 B2 *	5/2020	Lockton H04L 65/4015
	8,805,732 B2	8/2014	Davie et al.	10,695,672 B2	6/2020	Lockton et al.
	8,813,112 B1	8/2014	Cibula et al.	10,709,987 B2	7/2020	Lockton et al.
	8,814,664 B2	8/2014	Amaitis et al.	10,721,543 B2	7/2020	Huske et al.
	8,817,408 B2	8/2014	Lockton et al.	10,981,070 B2	4/2021	Isgreen
	8,837,072 B2	9/2014	Lockton et al.	11,154,775 B2 *	10/2021	Lockton A63F 13/537
	8,849,225 B1	9/2014	Choti	2001/0004609 A1	6/2001	Walker et al.
	8,849,255 B2	9/2014	Choti	2001/0005670 A1	6/2001	Lahtinen
	8,858,313 B1	10/2014	Selfors	2001/0013067 A1	8/2001	Koyanagi
	8,870,639 B2	10/2014	Lockton et al.	2001/0013125 A1	8/2001	Kitsukawa et al.
	8,935,715 B2	1/2015	Cibula et al.	2001/0020298 A1	9/2001	Rector, Jr. et al.
	9,056,251 B2	6/2015	Lockton	2001/0032333 A1	10/2001	Flickinger
	9,067,143 B2	6/2015	Lockton et al.	2001/0036272 A1	11/2001	Hirayama
	9,069,651 B2	6/2015	Barber	2001/0036853 A1	11/2001	Thomas
	9,076,303 B1	7/2015	Park	2001/0044339 A1	11/2001	Cordero
	9,098,883 B2	8/2015	Asher et al.	2001/0054019 A1	12/2001	de Fabrega
	9,111,417 B2	8/2015	Leen et al.	2002/0010789 A1	1/2002	Lord
	9,205,339 B2	12/2015	Cibula et al.	2002/0018477 A1	2/2002	Katz
	9,233,293 B2	1/2016	Lockton	2002/0026321 A1	2/2002	Faris
	9,258,601 B2	2/2016	Lockton et al.	2002/0029381 A1	3/2002	Inselberg
	9,270,789 B2	2/2016	Huske et al.	2002/0035609 A1	3/2002	Lessard
	9,289,692 B2	3/2016	Barber	2002/0037766 A1	3/2002	Muniz
	9,306,952 B2	4/2016	Burman et al.	2002/0069265 A1	3/2002	Bountour
	9,314,686 B2	4/2016	Lockton	2002/0042293 A1	4/2002	Ubale et al.
	9,314,701 B2	4/2016	Lockton et al.	2002/0046099 A1	4/2002	Frengut et al.
	9,355,518 B2	5/2016	Amaitis et al.	2002/0054088 A1	5/2002	Tanskanen et al.
	9,406,189 B2	8/2016	Scott et al.	2002/0055385 A1	5/2002	Otsu
	9,430,901 B2	8/2016	Amaitis et al.	2002/0056089 A1	5/2002	Houston
	9,457,272 B2	10/2016	Lockton et al.	2002/0059094 A1	5/2002	Hosea et al.
	9,498,724 B2	11/2016	Lockton et al.	2002/0059623 A1	5/2002	Rodriguez et al.
	9,501,904 B2	11/2016	Lockton	2002/0069076 A1	6/2002	Faris
	9,504,922 B2	11/2016	Lockton et al.	2002/0076084 A1	6/2002	Tian
	9,511,287 B2	12/2016	Lockton et al.	2002/0078176 A1	6/2002	Nomura et al.
	9,526,991 B2	12/2016	Lockton et al.	2002/0083461 A1	6/2002	Hutcheson
	9,536,396 B2	1/2017	Amaitis et al.	2002/0091833 A1	7/2002	Grimm
	9,556,991 B2	1/2017	Furuya	2002/0094869 A1	7/2002	Harkham
	9,604,140 B2	3/2017	Lockton et al.	2002/0095333 A1	7/2002	Jokinen et al.
	9,652,937 B2	5/2017	Lockton	2002/0097983 A1	7/2002	Wallace et al.
	9,662,576 B2	5/2017	Lockton et al.	2002/0099709 A1	7/2002	Wallace
	9,662,577 B2	5/2017	Lockton et al.	2002/0100063 A1	7/2002	Herigstad et al.
	9,672,692 B2 *	6/2017	Lockton G07F 17/32	2002/0103696 A1	8/2002	Huang et al.
	9,687,738 B2	6/2017	Lockton et al.	2002/0105535 A1	8/2002	Wallace et al.
	9,687,739 B2	6/2017	Lockton et al.	2002/0107073 A1	8/2002	Binney
	9,707,482 B2	7/2017	Lockton et al.	2002/0108112 A1	8/2002	Wallace et al.
	9,716,918 B1	7/2017	Lockton et al.	2002/0108125 A1	8/2002	Joao
	9,724,603 B2	8/2017	Lockton et al.	2002/0108127 A1	8/2002	Lew et al.
	9,744,453 B2	8/2017	Lockton et al.	2002/0112249 A1	8/2002	Hendricks et al.
	9,805,549 B2	10/2017	Asher et al.	2002/0115488 A1	8/2002	Berry et al.
				2002/0119821 A1	8/2002	Sen
				2002/0120930 A1	8/2002	Yona
				2002/0124247 A1	9/2002	Houghton
				2002/0132614 A1	9/2002	Vanlujit et al.
				2002/0133817 A1	9/2002	Markel

US 12,005,349 B2

Page 5

(56)

References Cited

U.S. PATENT DOCUMENTS

2002/0133827	A1	9/2002	Newman et al.	2004/0185881	A1	9/2004	Lee
2002/0142843	A1	10/2002	Roelofs	2004/0190779	A1	9/2004	Sarachik et al.
2002/0144273	A1	10/2002	Reto	2004/0198495	A1	10/2004	Cisneros et al.
2002/0147049	A1	10/2002	Carter, Sr.	2004/0201626	A1	10/2004	Lavoie
2002/0157002	A1	10/2002	Messerges et al.	2004/0203667	A1	10/2004	Shroder
2002/0157005	A1	10/2002	Bunk	2004/0203898	A1	10/2004	Bodin et al.
2002/0159576	A1	10/2002	Adams	2004/0210507	A1	10/2004	Asher et al.
2002/0162031	A1	10/2002	Levin et al.	2004/0215756	A1	10/2004	VanAntwerp
2002/0162117	A1	10/2002	Pearson	2004/0216161	A1	10/2004	Barone, Jr. et al.
2002/0165020	A1	11/2002	Koyama	2004/0216171	A1	10/2004	Barone, Jr. et al.
2002/0165025	A1	11/2002	Kawahara	2004/0224750	A1	11/2004	Ai-Ziyoud
2002/0177483	A1	11/2002	Cannon	2004/0242321	A1	12/2004	Overton
2002/0184624	A1	12/2002	Spencer	2004/0266513	A1	12/2004	Odom
2002/0187825	A1	12/2002	Tracy	2005/0005303	A1	1/2005	Barone, Jr. et al.
2002/0198050	A1	12/2002	Patchen	2005/0021942	A1	1/2005	Diehl et al.
2003/0002638	A1	1/2003	Kaars	2005/0026699	A1	2/2005	Kinzer et al.
2003/0003997	A1	1/2003	Vuong et al.	2005/0028208	A1	2/2005	Ellis
2003/0013528	A1	1/2003	Allibhoy et al.	2005/0043094	A1	2/2005	Nguyen et al.
2003/0023547	A1	1/2003	France	2005/0076371	A1	4/2005	Nakamura
2003/0040363	A1	2/2003	Sandberg	2005/0077997	A1	4/2005	Landram
2003/0054885	A1	3/2003	Pinto et al.	2005/0060219	A1	5/2005	Ditering et al.
2003/0060247	A1	3/2003	Goldberg et al.	2005/0097599	A1	5/2005	Potnick et al.
2003/0066089	A1	4/2003	Anderson	2005/0101309	A1	5/2005	Croome
2003/0069828	A1	4/2003	Blazey et al.	2005/0113164	A1	5/2005	Buecheler et al.
2003/0070174	A1	4/2003	Solomon	2005/0003878	A1	6/2005	Updike
2003/0078924	A1	4/2003	Liechty et al.	2005/0116416	A1	6/2005	Peterson
2003/0086691	A1	5/2003	Yu	2005/0131984	A1	6/2005	Hofmann et al.
2003/0087652	A1	5/2003	Simon et al.	2005/0138668	A1	6/2005	Gray et al.
2003/0088648	A1	5/2003	Bellaton	2005/0144102	A1	6/2005	Johnson
2003/0088878	A1	5/2003	Rogers	2005/0155083	A1	7/2005	Oh
2003/0114224	A1	6/2003	Anttila et al.	2005/0177861	A1	8/2005	Ma et al.
2003/0115152	A1	6/2003	Flaherty	2005/0210526	A1	9/2005	Levy et al.
2003/0125109	A1	7/2003	Green	2005/0216838	A1	9/2005	Graham
2003/0134678	A1	7/2003	Tanaka	2005/0235043	A1	10/2005	Teodosiu et al.
2003/0144017	A1	7/2003	Inselberg	2005/0239551	A1	10/2005	Griswold
2003/0154242	A1	8/2003	Hayes et al.	2005/0255901	A1	11/2005	Kreutzer
2003/0165241	A1	9/2003	Fransdonk	2005/0256895	A1	11/2005	Dussault
2003/0177167	A1	9/2003	Afage et al.	2005/0266869	A1	12/2005	Jung
2003/0177504	A1	9/2003	Paulo et al.	2005/0267969	A1	12/2005	Poikselka et al.
2003/0189668	A1	10/2003	Newman et al.	2005/0273804	A1	12/2005	Preisman
2003/0195023	A1	10/2003	Di Cesare	2005/0283800	A1	12/2005	Ellis et al.
2003/0195807	A1	10/2003	Maggio	2005/0288080	A1	12/2005	Lockton et al.
2003/0208579	A1	11/2003	Brady et al.	2005/0288101	A1	12/2005	Lockton et al.
2003/0211856	A1	11/2003	Zilliacus	2005/0288812	A1	12/2005	Cheng
2003/0212691	A1	11/2003	Kuntala et al.	2006/0020700	A1	1/2006	Qiu
2003/0216185	A1	11/2003	Varley	2006/0025070	A1	2/2006	Kim et al.
2003/0216857	A1	11/2003	Feldman et al.	2006/0046810	A1	3/2006	Tabata
2003/0228866	A1	12/2003	Pezeshki	2006/0047772	A1	3/2006	Crutcher
2003/0233425	A1	12/2003	Lyons et al.	2006/0053390	A1	3/2006	Garipey-Viles
2004/0005919	A1	1/2004	Walker et al.	2006/0058103	A1	3/2006	Danieli
2004/0014524	A1	1/2004	Pearlman	2006/0059161	A1	3/2006	Millett et al.
2004/0015442	A1	1/2004	Hmlinen	2006/0063590	A1	3/2006	Abassi et al.
2004/0022366	A1	2/2004	Ferguson et al.	2006/0082068	A1	4/2006	Patchen
2004/0025190	A1	2/2004	McCalla	2006/0087585	A1	4/2006	Seo
2004/0056897	A1	3/2004	Ueda	2006/0089199	A1	4/2006	Jordan et al.
2004/0060063	A1	3/2004	Russ et al.	2006/0094409	A1	5/2006	Inselberg
2004/0073915	A1	4/2004	Dureau	2006/0101492	A1	5/2006	Lowcock
2004/0088729	A1	5/2004	Petrovic et al.	2006/0111168	A1	5/2006	Nguyen
2004/0093302	A1	5/2004	Baker et al.	2006/0135253	A1	6/2006	George et al.
2004/0152454	A1	5/2004	Kauppinen	2006/0148569	A1	7/2006	Beck
2004/0107138	A1	6/2004	Maggio	2006/0156371	A1	7/2006	Maetz et al.
2004/0117831	A1	6/2004	Ellis et al.	2006/0160597	A1	7/2006	Wright
2004/0117839	A1	6/2004	Watson et al.	2006/0174307	A1	8/2006	Hwang et al.
2004/0128319	A1	7/2004	Davis et al.	2006/0183547	A1	8/2006	Mc Monigle
2004/0139158	A1	7/2004	Datta	2006/0183548	A1	8/2006	Morris et al.
2004/0139482	A1	7/2004	Hale	2006/0190654	A1	8/2006	Joy
2004/0148638	A1	7/2004	Weisman et al.	2006/0205483	A1	9/2006	Meyer et al.
2004/0152517	A1	8/2004	Haedisty	2006/0205509	A1	9/2006	Hirota
2004/0152519	A1	8/2004	Wang	2006/0205510	A1	9/2006	Lauper
2004/0158855	A1	8/2004	Gu et al.	2006/0217198	A1	9/2006	Johnson
2004/0162124	A1	8/2004	Barton et al.	2006/0236352	A1	10/2006	Scott, III
2004/0166873	A1	8/2004	Simic	2006/0248553	A1	11/2006	Mikkelsen et al.
2004/0176162	A1	9/2004	Rothschild	2006/0248564	A1	11/2006	Zinevitch
2004/0178923	A1	9/2004	Kuang	2006/0256865	A1	11/2006	Westerman
2004/0183824	A1	9/2004	Benson	2006/0256868	A1	11/2006	Westerman
				2006/0269120	A1	11/2006	Nehmadi et al.
				2006/0285586	A1	12/2006	Westerman
				2007/0004516	A1	1/2007	Jordan et al.
				2007/0013547	A1	1/2007	Boaz

US 12,005,349 B2

Page 6

(56)

References Cited

U.S. PATENT DOCUMENTS

2007/0019826	A1	1/2007	Horbach et al.	2012/0295686	A1	11/2012	Lockton
2007/0028272	A1	2/2007	Lockton	2013/0005453	A1	1/2013	Nguyen et al.
2007/0037623	A1	2/2007	Romik	2013/0072271	A1	3/2013	Ockton et al.
2007/0054695	A1	3/2007	Huske et al.	2013/0079081	A1	3/2013	Lockton et al.
2007/0078009	A1	4/2007	Lockton et al.	2013/0079092	A1	3/2013	Lockton et al.
2007/0083920	A1	4/2007	Mizoguchi et al.	2013/0079093	A1	3/2013	Lockton et al.
2007/0086465	A1	4/2007	Paila et al.	2013/0079135	A1	3/2013	Lockton et al.
2007/0087832	A1	4/2007	Abbott	2013/0079150	A1	3/2013	Lockton et al.
2007/0093296	A1	4/2007	Asher	2013/0079151	A1	3/2013	Lockton et al.
2007/0106721	A1	5/2007	Schloter	2013/0196774	A1	8/2013	Lockton et al.
2007/0107010	A1	5/2007	Jolna et al.	2013/0225285	A1	8/2013	Lockton
2007/0129144	A1	6/2007	Katz	2013/0225299	A1	8/2013	Lockton
2007/0147870	A1	7/2007	Nagashima et al.	2014/0031134	A1	1/2014	Lockton et al.
2007/0162328	A1	7/2007	Reich	2014/0100011	A1	4/2014	Gingher
2007/0183744	A1	8/2007	Koizumi	2014/0106832	A1	4/2014	Lockton et al.
2007/0197247	A1	8/2007	Inselberg	2014/0128139	A1	5/2014	Shuster et al.
2007/0210908	A1	9/2007	Putterman et al.	2014/0155130	A1	6/2014	Lockton et al.
2007/0219856	A1	9/2007	Ahmad-Taylor	2014/0155134	A1	6/2014	Lockton
2007/0222652	A1	9/2007	Cattone et al.	2014/0206446	A1	7/2014	Lockton et al.
2007/0226062	A1	9/2007	Hughes et al.	2014/0237025	A1	8/2014	Huske et al.
2007/0238525	A1	10/2007	Suomela	2014/0248952	A1	9/2014	Cibula et al.
2007/0243936	A1	10/2007	Binenstock et al.	2014/0256432	A1	9/2014	Lockton et al.
2007/0244570	A1	10/2007	Speiser et al.	2014/0279439	A1	9/2014	Brown
2007/0244585	A1	10/2007	Speiser et al.	2014/0287832	A1	9/2014	Lockton et al.
2007/0244749	A1	10/2007	Speiser et al.	2014/0309001	A1	10/2014	Root
2007/0265089	A1	11/2007	Robarts	2014/0335961	A1	11/2014	Lockton et al.
2007/0294410	A1	12/2007	Pandya	2014/0335962	A1	11/2014	Lockton et al.
2008/0005037	A1	1/2008	Hammad	2014/0378212	A1	12/2014	Sims
2008/0013927	A1	1/2008	Kelly et al.	2015/0011310	A1	1/2015	Lockton et al.
2008/0051201	A1	2/2008	Lore	2015/0024814	A1	1/2015	Root
2008/0066129	A1	3/2008	Katcher et al.	2015/0067732	A1	3/2015	Howe et al.
2008/0076497	A1	3/2008	Kiskis et al.	2015/0148130	A1	5/2015	Cibula et al.
2008/0104630	A1	5/2008	Bruce	2015/0238839	A1	8/2015	Lockton
2008/0146337	A1	6/2008	Halonen	2015/0238873	A1	8/2015	Amone et al.
2008/0169605	A1	7/2008	Shuster et al.	2015/0258452	A1	9/2015	Lockton et al.
2008/0222672	A1	9/2008	Piesing	2015/0356831	A1	12/2015	Osibodu
2008/0240681	A1	10/2008	Fukushima	2016/0023116	A1	1/2016	Wire
2008/0248865	A1	10/2008	Tedesco	2016/0045824	A1	2/2016	Lockton et al.
2008/0270288	A1	10/2008	Butterly et al.	2016/0049049	A1	2/2016	Lockton
2008/0288600	A1	11/2008	Clark	2016/0054872	A1	2/2016	Cibula et al.
2008/0315521	A1	12/2008	Reabe, Jr.	2016/0082357	A1	3/2016	Lockton
2009/0011781	A1	1/2009	Merrill et al.	2016/0121208	A1	5/2016	Lockton et al.
2009/0094632	A1	4/2009	Newman et al.	2016/0134947	A1	5/2016	Huske et al.
2009/0103892	A1	4/2009	Hirayama	2016/0217653	A1	7/2016	Meyer
2009/0186676	A1	7/2009	Amaitis et al.	2016/0220908	A1	8/2016	Isgreen
2009/0163271	A1	9/2009	George et al.	2016/0271501	A1	9/2016	Balsbaugh
2009/0228351	A1	9/2009	Rijsenbrij	2016/0361647	A1	12/2016	Lockton et al.
2009/0234674	A1	9/2009	Wurster	2016/0375362	A1	12/2016	Lockton et al.
2009/0264188	A1	10/2009	Soukup	2017/0036110	A1	2/2017	Lockton et al.
2009/0271512	A1	10/2009	Jorgensen	2017/0036117	A1	2/2017	Lockton et al.
2009/0325716	A1	12/2009	Harari	2017/0043259	A1	2/2017	Lockton et al.
2010/0099421	A1	4/2010	Patel et al.	2017/0053498	A1	2/2017	Lockton
2010/0099471	A1	4/2010	Feeney et al.	2017/0065891	A1	3/2017	Lockton et al.
2010/0107194	A1	4/2010	McKissick et al.	2017/0098348	A1	4/2017	Odom
2010/0120503	A1	5/2010	Hoffman et al.	2017/0103615	A1	4/2017	Theodosopoulos
2010/0137057	A1	6/2010	Fleming	2017/0128840	A1	5/2017	Croci
2010/0203936	A1	8/2010	Levy	2017/0221314	A1	8/2017	Lockton
2010/0261533	A1	10/2010	Kryger	2017/0225071	A1	8/2017	Lockton et al.
2010/0279764	A1	11/2010	Allen et al.	2017/0225072	A1	8/2017	Lockton et al.
2010/0296511	A1	11/2010	Prodan	2017/0232340	A1	8/2017	Lockton
2011/0016224	A1	1/2011	Riley	2017/0243438	A1	8/2017	Merati
2011/0053681	A1	3/2011	Goldman	2017/0249801	A1	8/2017	Malek
2011/0065490	A1	3/2011	Lutnick	2017/0252649	A1	9/2017	Lockton et al.
2011/0081958	A1	4/2011	Herman	2017/0259173	A1	9/2017	Lockton et al.
2011/0116461	A1	5/2011	Holt	2017/0264961	A1	9/2017	Lockton
2011/0124397	A1	5/2011	Gingher	2017/0282067	A1	10/2017	Lockton et al.
2011/0130197	A1	6/2011	Bythar et al.	2017/0296916	A1	10/2017	Lockton et al.
2011/0227287	A1	9/2011	Reabe	2017/0304726	A1	10/2017	Lockton et al.
2011/0269548	A1	11/2011	Barclay et al.	2017/0345260	A1	11/2017	Strause
2011/0306428	A1	12/2011	Lockton et al.	2018/0001213	A1	1/2018	Tsang
2012/0058808	A1	3/2012	Lockton	2018/0025586	A1	1/2018	Lockton
2012/0115585	A1	5/2012	Goldman	2018/0071637	A1	3/2018	Baazov
2012/0157178	A1	6/2012	Lockton	2018/0104582	A1	4/2018	Lockton et al.
2012/0264496	A1	10/2012	Behrman et al.	2018/0104596	A1	4/2018	Lockton et al.
2012/0282995	A1	11/2012	Allen et al.	2018/0117464	A1	5/2018	Lockton et al.
				2018/0140955	A1	5/2018	Lockton et al.
				2018/0154255	A1	6/2018	Lockton
				2018/0169523	A1	6/2018	Lockton et al.
				2018/0190077	A1	7/2018	Hall

US 12,005,349 B2

Page 7

(56)

References Cited

U.S. PATENT DOCUMENTS

2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov

FOREIGN PATENT DOCUMENTS

CA	2279069	7/1999
CA	2287617	10/1999
EP	0649102 A3	6/1996
GB	2364485	1/2002
JP	11-46356	2/1999
JP	11-239183	8/1999
JP	2000-165840	6/2000
JP	2000-217094	8/2000
JP	2000-358255	12/2000
JP	2001-28743	1/2001
JP	2000-209563	7/2008
NZ	330242	10/1989
WO	01/039506 A2	5/2001
WO	01/65743 A1	9/2001
WO	02/03698 A1	10/2002
WO	2005064506 A1	7/2005
WO	2006004855	1/2006
WO	2006004856	1/2006
WO	2007002284	1/2007
WO	2007016575	2/2007
WO	2007041667	4/2007
WO	2008027811 A2	3/2008
WO	2008115858 A1	9/2008

OTHER PUBLICATIONS

Gambling Commission, "Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, <http://gamblingcommission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf>.

Sipko et al., "Machine learning for the prediction of professional

tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, <http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf>.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from, <http://www.winviewgames.com/press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/>.

International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasy sport-Wikipedia.pdf, [https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969\(Year:2015\)](https://en.wikipedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015)).

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

'Ark 4.0 Standard Edition, Technical Overview' www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100.html.

"IST and Spotal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_spotal.html.

"Modeling User Behavior in Networked Games by Tristan Henderson and Saleem Bhatti", www.woodworm.cs.UML.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6.html.

"On the Performance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1>.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

<http://help.yahoo.com/help/us/tourn/tourn-03.html>.

* cited by examiner

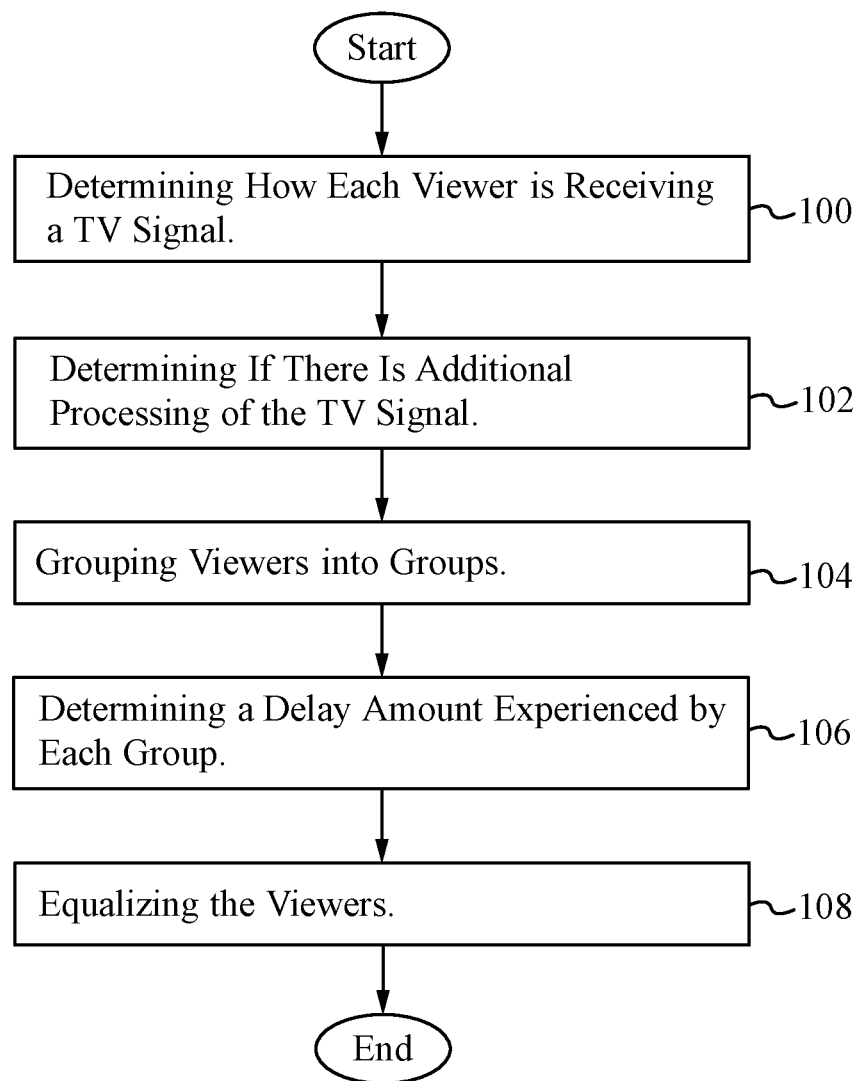


Fig. 1

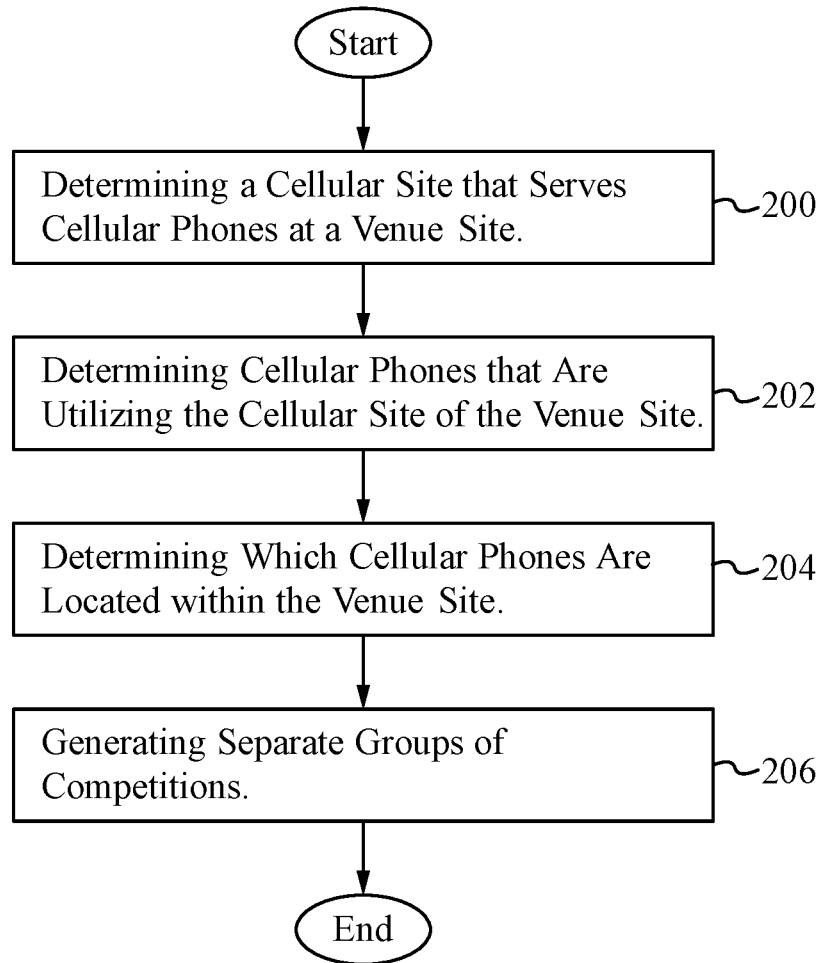


Fig. 2

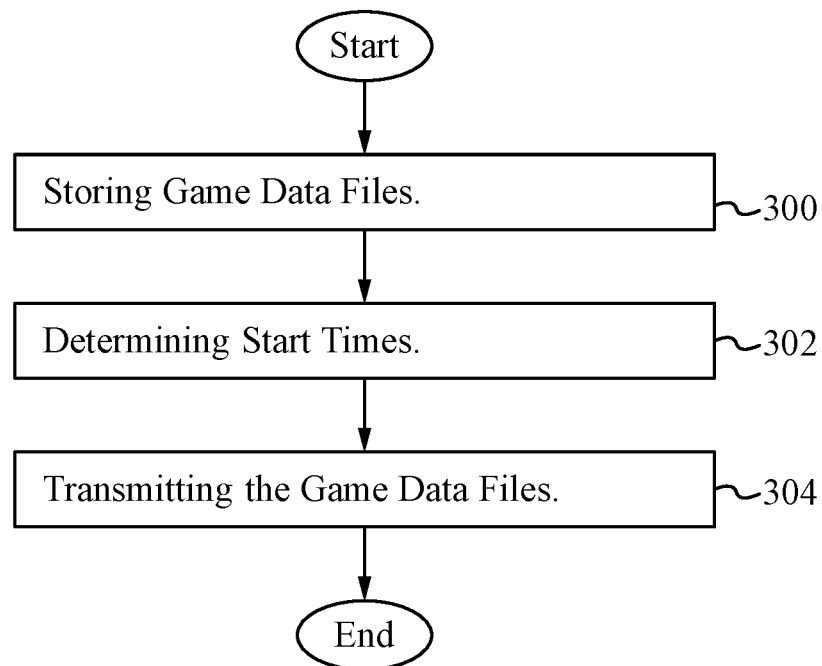


Fig. 3

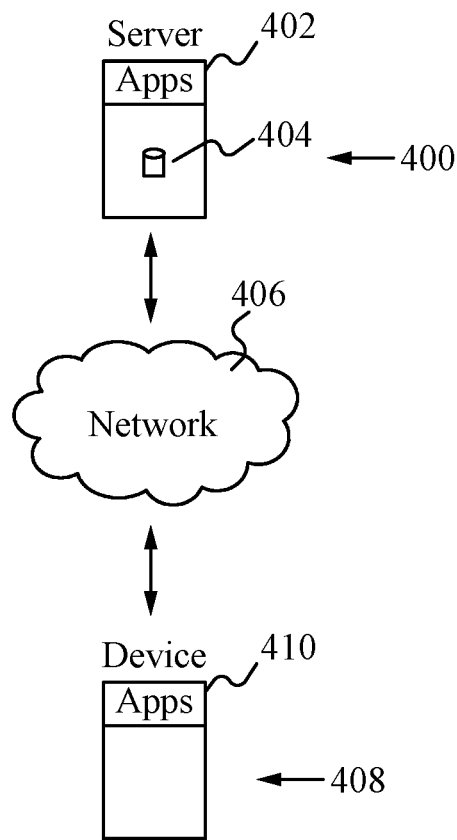


Fig. 4

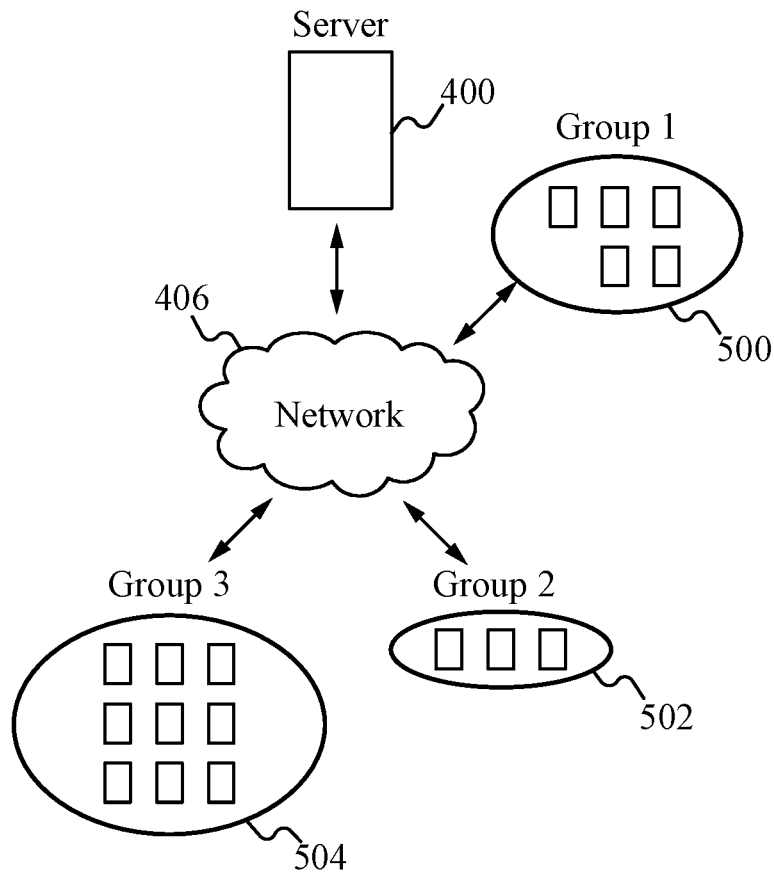


Fig. 5

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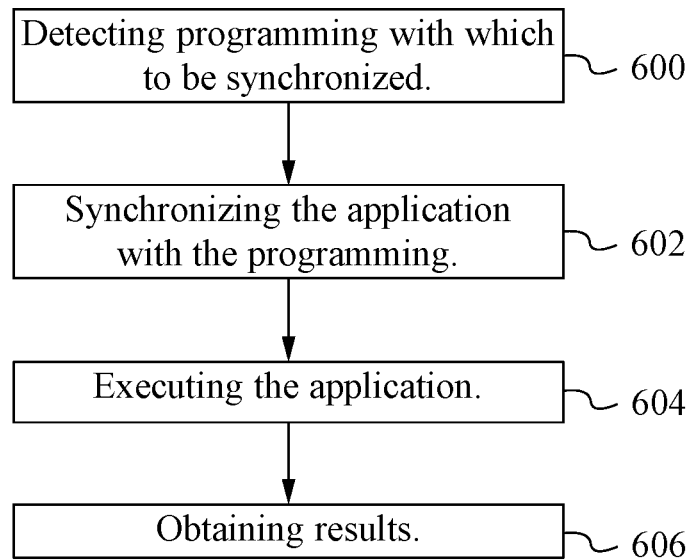


Fig. 6

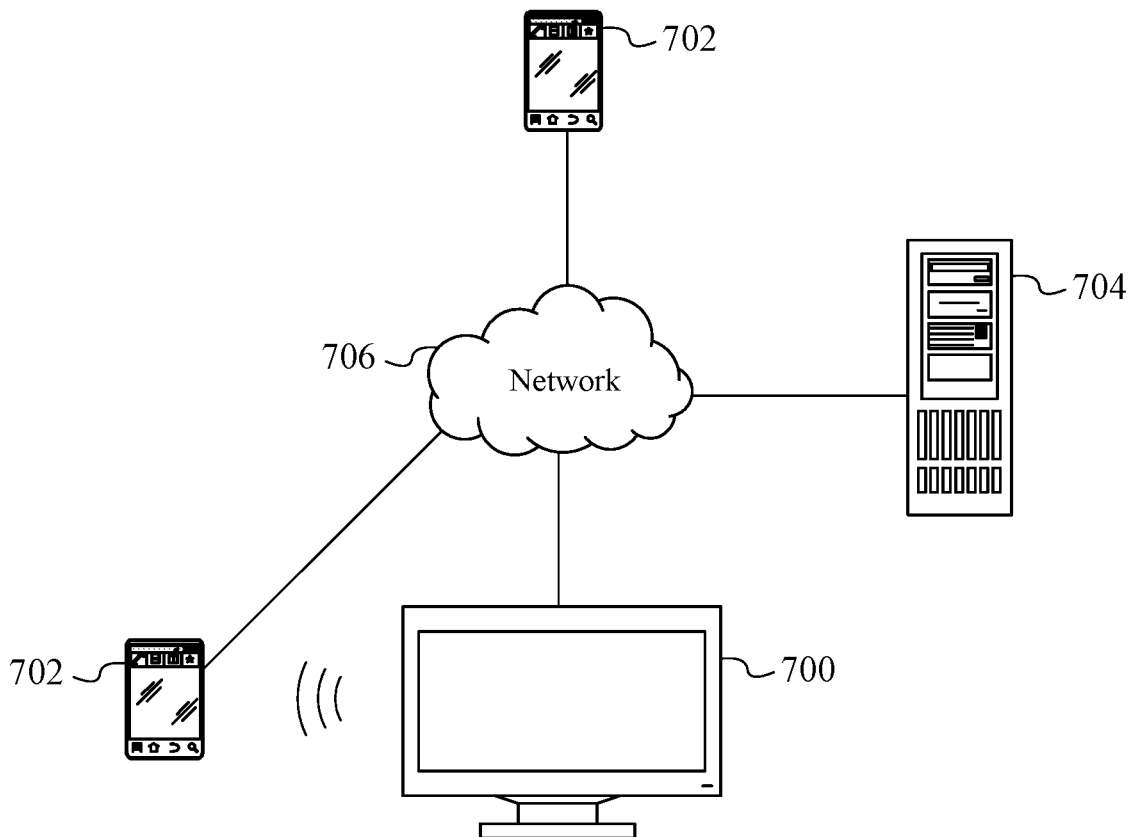


Fig. 7

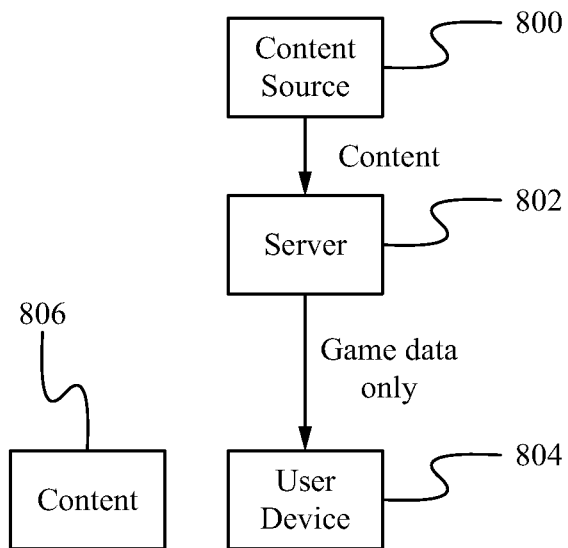


Fig. 8

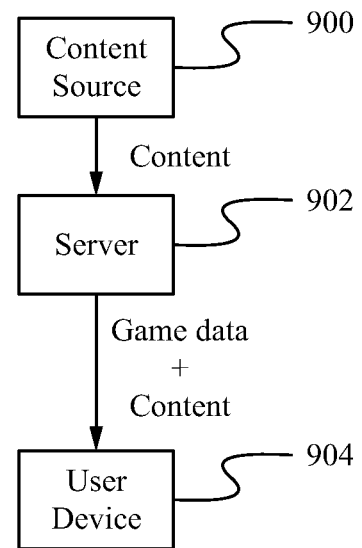


Fig. 9

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**SYNCHRONIZED GAMING AND
PROGRAMMING**

RELATED APPLICATION(S)

This Patent Application is a continuation of U.S. patent application Ser. No. 16/865,000, filed May 1, 2020, titled "SYNCHRONIZED GAMING AND PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/886,704, filed Feb. 1, 2018, titled "SYNCHRONIZED GAMING AND PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/586,198, filed May 3, 2017, titled "SYNCHRONIZED GAMING AND PROGRAMMING," which is a continuation-in-part of U.S. patent application Ser. No. 14/172,539, filed Feb. 4, 2014, titled "SYNCHRONIZED GAMING AND PROGRAMMING," which is a divisional of U.S. patent application Ser. No. 13/484,129, filed May 30, 2012, titled "SYNCHRONIZED GAMING AND PROGRAMMING" which is a continuation-in-part of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

The U.S. patent application Ser. No. 15/586,198, filed May 3, 2017, titled "SYNCHRONIZED GAMING AND PROGRAMMING," is also a continuation-in-part of U.S. patent application Ser. No. 15/332,625, filed Oct. 24, 2016, titled "CELLULAR PHONE GAMES BASED UPON TELEVISION ARCHIVES," which is a continuation of U.S. patent application Ser. No. 11/542,335, filed Oct. 2, 2006, titled "CELLULAR PHONE GAMES BASED UPON TELEVISION ARCHIVES," which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/723,301, filed Oct. 3, 2005, and entitled "CELLULAR PHONE GAMES BASED UPON TELEVISION ARCHIVES" which are both also hereby incorporated by reference in their entireties.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 230 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control

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television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish network may experience a 3 second delay compared to an individual in California using a cable network. Live streams via the Internet of events utilizing a TV set or other display offer an alternative method of viewing televised events. The signal compression process creates systemic propagation delays that are often significant. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

To encourage viewer participation, games, contests and social interactions are able to be synchronized with pro-

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gramming such as television shows or commercials utilizing a second screen such as a cell phone, iPad® or laptop computer. The programming is able to be television programming, Internet programming (e.g. a streamed video displayed on a webpage or mobile device) or any other programming. The gaming is able to be any game such as a game of skill or chance, for example, betting on the outcome of a soccer penalty kick, where legal.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention.

FIG. 6 illustrates a flowchart of a method of implementing a game synchronized with programming according to some embodiments.

FIG. 7 illustrates a system for implementing a game synchronized with programming according to some embodiments.

FIG. 8 illustrates a system for implementing a game synchronized with programming according to some embodiments.

FIG. 9 illustrates a system for implementing a game synchronized with programming according to some embodiments.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODS ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

Three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming are addressed. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays on a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars. In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television

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action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. This is a challenge faced in Europe where over 65 million TV viewers participate in "In Game" wagering on televised sporting events. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game of skill based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one

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who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the system addressed herein is to ensure the competitors feel they are on equal footing.

The above described issue is solved through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system, a particular satellite system, or through an Internet delivered live stream). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. A variety of methodologies are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where “lock out” signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as “cohorts.” For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable “head ends” or central broadcast points serving a “cohort.” This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts who are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

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In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider.

5 These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, an event is streamed via an Internet connection, where a game control system measures the compression caused delay in signal delivery for separate sources and appropriately adjusts the game control data to individually synchronize with the separate sources of the televised event.

15 In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers’ television sets.

20 In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

25 Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game “lock out” signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers’ cohort.

30 Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of “lock out” data relative to the event triggering the “lock out,” based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive “lock out” signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

35 Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the “lock out” signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. 1 illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step 100, it is determined how each viewer receives a television signal, where possibilities include an

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over the air broadcast, a particular cable system or a particular satellite system. In the step 102, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant's house, office, bar or other location from an item such as a DVR. In the step 104, the viewers/participants are grouped into groups also referred to as cohorts. In the step 106, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step 108, the viewers/participants are equalized. The methods of equalization vary, but some examples include time stamping on the game "lock out" signals, imposing a time stamp on the entire data stream so that competitors receiving their television information are slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller

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within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, SnapSmart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. A communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone is able to be used, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced through the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. 2 illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step 200, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step 202, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step 204, it is determined if the cellular phone is located within the venue site. The determination is made by

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comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step 204, separate groups are generated in the step 206. A group is generated for users that are located at the live venue, and a group is generated for those players that are watching live on television. Therefore, the live players who do not experience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of Fortune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment

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segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

A system first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, or being physically present at the event venue, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their

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cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. 3 illustrates a flowchart of a process of handling latency issues for taped programs. In the step 300, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step 302, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining start times are possible as well. In the step 304, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. 4 illustrates a graphical representation of an embodiment of the present invention. A server 400 contains applications 402 and a storage mechanism 404. The applications 402 include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server 400 is able to determine which cellular phones are logged into the server 400 and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism 404 is utilized for storing the applications 402 in addition to selections and results. The storage mechanism 404 preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server 400 is part of a network 406. A device 408 couples to the server 400 through the network 406. In some embodiments the network 406 includes the Internet. In some embodiments, the network 406 includes a cellular network. Also, in some embodiments, the network 406 includes both the Internet and a cellular network. The device 408 is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server 400 is possible. The device 408 stores a variety of applications 410. A game application is stored on the device 408. In some embodiments, software to identify the physical location of the device 408 is stored on the device 408. The device 408 also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device 408 receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server 400 and on the device 408, as necessary, for smooth operation of the games.

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Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. 5 illustrates a graphical representation of a network of devices of the present invention. A server 400 is coupled to many devices through a network 406. The devices are grouped into groups or cohorts as described above. For example, Group 1 of devices 500 includes a set of devices that receive a television signal through cable with a delay time of x. Group 2 of devices 502 includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices 504 includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

Game Production

In the production process, game data is time synchronized precisely with a video stream, utilizing the game production tool.

When playing, the user selects answers (e.g., 1, 2, 3, or 4 or by pressing on the touchscreen) on his cellular phone to answer the question before a time stamped "lockout" signal contained in the game data is received/triggered, precluding further input. The competitor's score is incremented or decremented by software in the game data, depending on whether the competitor is right or wrong with their selection.

The video content and the separately produced overlying game data are then either combined for streaming or broadcast (e.g., into a single data file, maintained as two data files), or an alternate methodology is utilized to ensure that the content is broadcast simultaneously on a single TCP, UDP, 3G, multicast, broadcast or other transmission, utilizing current data compression capabilities. Any appropriate transmission methodology is utilized, including WiFi. The game data contains graphic information separate from the video of the game, such as the selection options, for example "run," "pass," for a game based on a football broadcast. Separate digital sound tracks, one from the television programming (including streamed video, for example, television programming streamed over the Internet to a computing device), and one related to the game programming are also able to be combined for a single transmission. In other words, data is able to be either A) downloaded in advance or B) streamed or C) broadcast. The different types of data: 1) video and audio, 2) graphic game play data, 3) audio enhancements, 4) other types of data, are able to be either combined with each other or sent separately. Therefore, users are able to play simultaneously wherein the video, audio and game play data are received by streaming, broadcasting or downloaded using a simultaneous start time. Users are also able to play on demand wherein the video, audio and game play data are received when requested by streaming, broadcasting or downloaded. Users are also able

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to practice with on demand games where they are not competing against other players. Regardless of how these discreet pieces of information are delivered to the phone, software resident on the phone ensures that the game play data and audio are synchronized with the video archive.

Game Play

Under this methodology, a user on an ad hoc basis, or as a subscriber to a service or charging the required fee to their cellular telephone bill, indicates their desire to participate in a contest based upon the old television program. The contests have a specific start time, displayed on the cellular phone, such as, for example, "1980 Super Bowl game, 3:15 pm," or in an alternative embodiment, the menu on the cellular phone describes a game played at any time by the cellular phone owner by selecting it from a menu on the cellular phone. Upon selecting this game from the menu, the underlying video and data files are streamed or downloaded to the cellular phone, and the video of the underlying telecast sporting event, game show, or other entertainment program, is displayed on the cellular phone utilizing software permanently or temporarily resident on a cellular phone client designed to display full motion video. A record of what games have been played for an individual subscriber is maintained on the service's server to ensure a subscriber always receives a game they have not played before.

Game Display

The data files which manage the game play, received simultaneously, also utilize software resident on the client for managing the display on the phone's LCD. This game software is able to be a separate "gaming client" or an "all in one" application which addresses the video and game elements, for example for a game based on a streamed broadcast received by the game playing client. The game data graphics are also able to be presented to the player by overlaying the text and symbols over the video content (e.g., television information), or in the alternative, utilize a separate portion of the cellular phone's display for this information, at the option of the producers. An example of this latter approach is the crawling information displayed at the bottom of a television screen containing stock ticker information or the way closed captioning information is displayed on television screens. In the alternative, a picture in picture (PIP) approach is also able to be used to separately display game play information from the underlying video (e.g., streaming video, television footage). In another alternative, the game play information is simply superimposed on top of the video.

Under this invention, the subscriber would play along with the 5- to 15-minute television segment of the game until its conclusion, and would be informed at the end, based upon software resident in the phone, what their total points earned are. In some embodiments, the segments are longer or shorter. By transmitting this game performance information to a central server for compilation, the competition would receive information on how their score relates to the scores achieved by other players of the game. Under an "on demand" game play format, users are able to selectively play against friends, and prizes would generally not be awarded, since the person could play the game as many times as they desire, or obtain the answers from someone who had played. Games Based on Simultaneous Broadcast Other than a Live Event

In an alternative embodiment, the combined video and game data files produced by the same methodology described above is able to be simultaneously broadcast to all participants at a specific time, such as every 15-minutes, to all of the players who have registered their intention to play

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a specific game. In this format, these files would be individually streamed, or in the alternative, digitally broadcast, precisely at the same time to all participants. Another approach is to download the data through streaming, broadcast or other downloading technique in advance. Under this approach, the application ensures that the video and game play started at the appropriate time. This is able to be done by signaling a "start" signal to all players.

While game play unfolds in a manner similar to that described in U.S. Pat. No. 4,592,546, a significant difference in this invention and the prior art, is that, in some embodiments, all of the information utilized for the game is pre-produced and combined in a single data file, and received simultaneously by all participating cellular phones broadcast or streamed, to be separated and displayed for simultaneous viewing on a cellular phone by the methods described above. In some embodiments, while the games unfold to the participant in virtually the same manner as a game based upon a live telecast of a sporting event or game show, the cellular phone is not utilized as a receiving device for a second mass media communications synchronized with the underlying telecast, but rather is receiving the single data file or stream which contains both the video of the telecast and the game data information. The video and game data is then separated by application software resident on the cellular phone for simultaneous display on a single color LCD display.

Since all players receive the same game data at the same time, cheating among players, possible with on demand games, is not possible, and prizes can be awarded.

Benefits

While there is a large potential demand for games of skill for prizes based upon the live telecast/streaming of sporting events and syndicated game shows, participation in these games is generally limited to prime time or near prime time viewing on week days, and sporting events on the weekends. The explosion in the popularity of cellular games of short duration indicates that the owners of cellular telephones often find 5-10 minutes during the day to participate in stimulating entertainment work breaks, while commuting to and from work, sometimes even when they are working, amongst other times. The methodologies described herein provide a new and unique form of entertainment. While based on popular television programming, the games are able to be enjoyed either on demand or several times an hour with scheduled start times, since they are generated from any content such as television content (live or archived). The games are ever changing and are based on programming with a proven huge fan audience. This invention provides the highest quality production value at a fraction of the cost of existing video, computer and cellular games. Other games require the skills of graphic artists and designers, and extensive programming to create full motion 3D graphics in attempt to make games like EA Sports® John Madden Football, or Sony's Jeopardy!® games as close to the actual telecast as possible. This invention repurposes the actual television content with the production values and excitement of the original broadcasts of these events at a fraction of the cost.

In some embodiments, the game data is able to be adjusted such that it is synchronized with a video stream. For example, in cooperation with an originator of a video stream (e.g., NFL), the game data is integrated with a streaming game application, which is a separate application from one for broadcast television. Furthering the example, two applications are available to provide similar but different competitions; a first application for use with a video stream and

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a second application for use with a television broadcast. The applications are similar in that they present questions and/or selections based on a video, but since the streaming video and the television broadcast may have different latencies, the applications operate slightly differently. In some embodiments, a single application is able to determine how the video content is being received (e.g., streaming versus broadcast), and the application is able to handle the latency differences. In some embodiments, an application determines when a stream is received (e.g., using automatic content recognition, watermarks, fingerprints, or any other analysis), and the application estimates and adjusts for an approximate delay for people in different locations. For example, servers or client devices in different parts of the world determine an amount of delay as described herein, and based on that amount of delay either delay presentation of a question/selection or perform other gameplay effects to ensure none of the participants of the game have an unfair advantage over other competitors based on the delay. Furthering the example, if users in San Francisco receive a stream 3 seconds after users in New York, then the presentation of a question for the users in New York is delayed 3 seconds, so that they all receive the question at the same time.

To utilize the methods and systems described herein, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the methods and systems described herein. The user simply plays as usual except that with the methods and systems described herein, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, the methods and systems described herein are able to be implemented automatically or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the methods and systems described herein are able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which

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typically has a few seconds delay, the participants are separated into different competitive groups wherein the attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the methods and systems described herein ensure that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

To encourage viewer participation, games, contests and social interactions are able to be synchronized with programming such as television shows or commercials utilizing a second screen such as a cell phone, iPad® or laptop computer. The programming is able to be television programming, Internet programming (e.g. a video displayed on a webpage or mobile device) or any other programming. The gaming is able to be any game such as a game of skill or chance, for example, a scavenger hunt or a treasure hunt.

In some embodiments, the programming and the gaming, contests or social interactions are displayed on a single screen. For example, Google TV™, Apple TV® or another IPTV includes a broadband connection which is capable of connecting to a website which is a companion site to the programming. The display on the television is able to include a Picture-in-Picture (PIP), display space near or around the telecast's picture (e.g., an L-shaped space), graphic overlay, or a split screen. In another example, a two-screen experience includes a wi-fi connection, an open wireless technology (e.g., Bluetooth®) or any other connection from the television to a tablet device such as an iPad®. In some embodiments, a computing device contained within the television couples to a server via the Internet, where the server stores files, displays, graphics, gaming information and/or any other information to be synchronized with the programming, and the application is separately displayed on the same screen for user interaction with the game or contest utilizing a controller for the television.

In a scavenger hunt game, a contest might be based on a member collecting items in a scavenger hunt fashion which appear in TV programs or commercials. The first person or teams to collect all of the items or collecting the most points wins.

In a treasure hunt game, clues to items to collect are given which make sense only upon the viewing of a commercial or program. A viewer enters an item (e.g. from multiple choice options), and the first to accumulate all of the items wins. Hereinafter, all references to a viewer are understood to include a single viewer or a team or teams of viewers. The teams are able to be formed through social networks or on an ad hoc basis. Exemplary formations of teams are able to be found in U.S. Pat. No. 8,002,618 which is hereby

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incorporated by reference in its entirety. For example, teams are able to be formed and then play any game or contest such as a scavenger hunt, treasure hunt or bingo. The players on each team are able to work jointly or separately to collect items and perform other game play actions.

For example, a treasure hunt game based on the entertainment content or TV commercials provides the first item to search for: "Old English Sheep Dog with red collar." The application in the game mode records an input such as a press of a screen or button by a viewer the instant they observe the dog appear on the TV screen in connection with a participating show or commercial. Executing the required input at this precise time would validate that indeed THE Old English Sheep Dog had been collected. In another version, a score of 1000 points would rapidly be decremented beginning when a treasure hunt object appeared in a TV show or commercial. A rapid input would get 990 points, and someone who had spent time to find their phone might get 450 points for a slower response. The points are decremented incrementally, exponentially or in any other manner.

The viewer receives a prize upon the accumulation of a designated level of points, or in a money contest such as a \$1 Million national contest, the first viewer to achieve a designated point's level wins the grand prize.

In another example of a game, a bingo-like game is presented where, instead of letters and numbers being used for a player's board, each player's board includes specific objects, characters, events or other items contained in a commercial, television series, show, event or other programming. The items are each collected by pressing a button within a prescribed amount of time (e.g., 5 seconds) of appearance of the object on the television. The first person to fill the card wins. Filling the card is able to mean filling the card fully or any other bingo-related definition of filling such as achieving a vertical, horizontal or diagonal line. For example, a player's card includes 25 slots, arranged in a 5x5 grid with items such as a Ford F-150, a Ford F-250, a Ford Focus, a Ford Mustang, an engine, and twenty other items. When the player watches a Ford commercial, the player sees a Ford Focus. The player then presses a button within the allotted time, and that slot in his board is filled. Each player's board is monitored, and when it is determined that a player has achieved a filled board, the player is declared the winner. In some embodiments, the other players are notified, and the game ends, and in some embodiments, additional winners are able to be determined (e.g. second and third place).

The system implements precise synchronization of a second screen and programming. The synchronization is able to be implemented using any methodology, such as utilizing the teachings of latencies. Exemplary methodologies for synchronizing have been described herein and any other methodologies of synchronizing are possible.

FIG. 6 illustrates a flowchart of a method of implementing a game synchronized with programming according to some embodiments. In the step 600, an application detects programming with which to be synchronized. In the step 602, the application synchronizes with the programming to provide application data such as gaming data. In the step 604, based on user responses, the game is executed. For example, a scavenger hunt game, treasure hunt or other game based on the observation of something contained in a television broadcast game is executed. In some embodiments, in the step 606, scores are tallied, prizes are awarded and/or other results are obtained. In some embodiments, the order of the steps is modified. In some embodiments, fewer or more steps are implemented.

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Detection and synchronization are able to be implemented in any manner. The efficacy of the games depend on each player having an opportunity to obtain the maximum number of points achievable by entering their input as soon as possible after the specified item appears on the TV screen. The following provides examples of detection and synchronization. Existing events in the telecast are used as synchronization points or start points for previously downloaded data files to a mobile client, as well as a watermark, fingerprint not detectable by the viewer. A synchronization point is a visible or audible event located within the telecast. A synchronization point for a live telecast is contained in audio or video within the telecast. Information is inserted in a Vertical Blanking Interval (VBI) or digital equivalent of a show and tracked online in real-time. Information is embedded in the telecast and tracked online in real-time. Determining a start time of the telecast includes using a recognizable signal recognizable by a mobile device. A start time of a commercial is delivered using a recognizable signal recognizable by a mobile device. A plurality of synchronization points are used by a client to continuously check to ensure pre-produced data files are synchronized with the telecast. Inserted audio or video is used to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the telecast. Inserted audio or video is used by a client to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the telecast. The inserted audio or video is used by a server to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the telecast.

In some embodiments, synchronizing includes determining an amount of delay to precisely synchronize between the game stored on a mobile device and the receipt of the program presented on a television (or mobile device through streaming) and substantially equalizing presentation of the game of skill or chance with programming or a commercial contained in a telecast through adjustment for the amount of delay of the telecast (or streaming content). Substantially equalizing includes equalizing receipt of lock out events relative to a televised/streamed event triggering a lock out. Synchronizing includes substantially equalizing a participant delay to ensure the participants each receive the game of skill or chance at substantially the same time. Synchronizing includes determining participant latency based on specific participant latencies and synchronizing the game of skill or chance for each of the participants. Synchronizing includes determining the latencies in receiving a streamed broadcast of an event and synchronizing game data to all recipients of the one or more streamed broadcasts of the event. Synchronizing includes utilizing an audio or video recognition system on a client with online access to the telecast's game control server. Synchronizing includes using added audio or video events in the telecast as synchronization points. A plurality of synchronization points within audio or video are used by software on a client in connection with a server to continuously monitor the telecast/streaming content to ensure the game of skill or chance played on the client is precisely synchronized with the telecast/streaming content. An artifact is inserted into the telecast/streaming content recognizable by an audio receiver in a mobile device which is utilized to start and continually keep the game of skill or chance synchronized with the telecast/streaming content.

Participants include ad hoc or preexisting groups of friends competing in a separate competition in disparate physical locations. The synchronization points are the audio

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or video data for the telecast/streaming content residing on a server online with a mobile device. The participants constitute ad hoc or existing groups of geographically dispersed friends participating in a separate game of chance or skill. The participants are ad hoc or previously organized groups of friends competing against each other in a separate contest. Equalizing the participants includes time stamping the amount of delay on game-related data. Establishing the amount of delay is through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal (or streaming content), linked to a game server, to provide information related to a precise arrival of an underlying television picture/streaming content.

FIG. 7 illustrates a system for implementing a game synchronized with programming according to some embodiments. The system includes several devices such as a viewing device 700, a secondary device 702, a server device 704 and a network 706. For example, a user views programming on the viewing device 700 (e.g. a television) and participates in a scavenger hunt game on the secondary device 702 (e.g. a smart phone). The game on the secondary device 702 is synchronized with the programming of the viewing device 700. In some embodiments, the synchronization takes place using a program on the secondary device 702, and in some embodiments, the server device 704 is used for synchronization. The network 706 is able to be any network such as the Internet, a cellular network or a combination of networks. Fewer or additional devices are able to be included within the system.

To utilize the synchronized gaming and programming, a user initiates a game which automatically synchronizes with the programming. In some embodiments, the programming initiates the game. For example, a user is watching television and a trigger in the television signal automatically starts the game. The user plays the game as any game would be played. For example, if the user is playing a scavenger hunt game, the user searches/looks for items and indicates when the items are found. If the user is playing a treasure hunt game, the user uses clues to locate an item. Points and/or prizes are awarded based on the timing of the user input/selections (e.g. a faster response receives more points than a slower response).

In operation, the synchronized gaming and programming is able to synchronize programming with a game presented on a second device. In some embodiments, the synchronized gaming and programming is also able to synchronize participants, for example by equalizing the amount of delay or sending a lockout signal at the appropriate time based on the amount of delay.

Although a scavenger hunt and a treasure hunt have been described herein, any other game is able to be played in conjunction with programming.

FIG. 8 illustrates a system for implementing a game synchronized with programming according to some embodiments. Content from a content source 800 is received at a game production center such as at a server 802. The content source 800 is able to be a venue (of a sporting event), a device at a venue or a broadcasting company device. The content is able to be received as streaming content or any other audio and/or video coming from the content source 800. For example, the content is able to be received via a television broadcast or an audio feed from a cellular phone present at a venue. A delay in the reception of the content is able to be determined (e.g., measured) as described herein. The delay amount is used to synchronize game data with the content or adjust the game data (e.g., adjust the time the

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game data is sent or triggered) at the server 802. In some embodiments, only the time-adjusted game data is sent from the server 802 to user devices 804 which display the game data (e.g., on web-connected televisions, laptops). In some embodiments, the user devices 804 only display the game data (without displaying the content), and in some embodiments, the same user devices display the content as well (e.g., smart television displays the game data and the content using overlays, picture-in-picture or another implementation). For example, the user devices 804 which only receive the game data display the game data, and content 806 (e.g., a football game telecast) is displayed on a television or another user device. Other devices are able to be implemented in the system as well. In other embodiments, the user is physically observing a live event, while also receiving the game data.

FIG. 9 illustrates a system for implementing a game synchronized with programming according to some embodiments. Content from a content source 900 is received at a game production center such as at a server 902. The content source 900 is able to be a venue (of a sporting event), a device at a venue or a broadcasting company device. The content is able to be received as streaming content or any other audio and/or video coming from the content source 900. For example, the content is able to be received via a television broadcast or an audio feed from a cellular phone present at a venue. A delay in the reception of the content is able to be determined (e.g., measured) as described herein. The delay amount is used to synchronize game data with the content and combine the game data with the content at the server 902. In some embodiments, the synchronized, combined game data and content is sent from the server 902 to user devices 904 which display the game data with the content (e.g., on web-connected televisions, laptops). In some embodiments, the same user devices display the game data with the content (e.g., smart television displays the game data and the content using overlays, picture-in-picture or another implementation). Other devices are able to be implemented in the system as well.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of playing a game, comprising:
 - a. streaming video data and game data;
 - b. operating a program to display the video data and the game data, wherein the video data and the game data are synchronized when displayed; and
 - c. preventing users from submitting a response to the game data based on the video data and a lockout signal.
2. The method of claim 1 further comprising receiving a game start signal and starting the game.
3. The method of claim 1 further comprising playing the game by selecting one or more choices related to the video data.
4. The method of claim 1 wherein the video data and the game data are displayed simultaneously.
5. The method of claim 1 wherein the video data and the game data are displayed simultaneously on the same device.

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6. The method of claim 1 wherein the video data and the game data are displayed simultaneously on separate devices.

7. The method of claim 1 further comprising collecting scores and reporting performance to participants' devices.

8. The method of claim 1 further comprising prohibiting further game-related input with the lockout signal.

9. The method of claim 1 wherein the game data contains graphic information in addition to the video data.

10. The method of claim 9 wherein the graphic information is displayed on the same device using methods including crawling information, closed captioned information, a picture in picture or a graphical overlay.

11. The method of claim 1 wherein the video data or the game data is buffered in advance of a scheduled start.

12. The method of claim 1 further comprising transmitting the video data and the game data on a transmission selected from a TCP, UDP, 3G, multicast or broadcast transmission.

13. The method of claim 1 wherein the video data and the game data are synchronously displayed.

14. The method of claim 1 wherein the video data and the game data are synchronized based on a delay and further wherein the delay represents delay of the game data.

15. The method of claim 1 wherein the video data comprises one or more live events.

16. The method of claim 15 wherein the one or more live events are viewed in person by a person physically attending a location corresponding to the one or more live events, wherein the person initiates the lockout signal based on occurrences in the one or more live events.

17. The method of claim 15 wherein information related to the one or more live events is received from a physical location corresponding to the one or more live events.

18. The method of claim 15 wherein the lockout signal occurs immediately before competitors in the contest are able to see relevant live action unfold.

19. The method of claim 15 wherein the lockout signal occurs immediately before a scoring chance in the one or more live events.

20. The method of claim 15 wherein the lockout signal involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

21. The method of claim 15 wherein the lockout signal applies for a limited amount of time.

22. The method of claim 15 wherein the lockout signal applies for an action lasting a limited amount of time.

23. The method of claim 15 wherein the lockout signal involves presenting new odds on an unresolved proposition.

24. A server for synchronizing a game or contest with streaming content comprising:

a. a memory for storing an application, the application configured for:

i. transmitting game data for the game or contest to one or more devices on which the game or contest is to be played wherein the game data is to be synchronized with the streaming content at the one or more devices; and

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ii. transmitting a lockout signal to the one or more devices to prevent users from submitting a response to the game or contest based on the streaming content; and

b. a processing component coupled to the memory, the processing component configured for processing the application.

25. The server of claim 24 further comprising determining an amount of delay in the streaming content using a method of automatic content recognition.

26. The server of claim 24 wherein existing events in the streaming content are used as synchronization points for previously downloaded data files to a mobile client.

27. The server of claim 24 wherein a synchronization point is a visible or audible event located within the streaming content.

28. The server of claim 24 wherein a synchronization point for synchronizing the streaming content and game data is contained in audio or video within the streaming content.

29. The server of claim 24 wherein information is embedded in the streaming content and tracked online in real-time.

30. The server of claim 24 further comprising determining an amount of delay in the streaming content using a recognizable signal recognizable by a mobile device.

31. The server of claim 24 wherein a plurality of synchronization points are used by a client to continuously check to ensure game data is synchronized with the streaming content.

32. The server of claim 24 wherein inserted audio or video is used to continuously check to ensure game data is synchronized on a client with the streaming content.

33. The server of claim 24 wherein the game or contest comprises one or more live events.

34. The server of claim 33 wherein the one or more live events are viewed in person by a person physically attending a location corresponding to the one or more live events, wherein the person initiates the lockout signal based on occurrences in the one or more live events.

35. The server of claim 33 wherein information related to the one or more live events is received from a physical location corresponding to the one or more live events.

36. The server of claim 33 wherein the lockout signal occurs immediately before competitors in the contest are able to see relevant live action unfold.

37. The server of claim 33 wherein the lockout signal occurs immediately before a scoring chance in the one or more events.

38. The server of claim 33 wherein the lockout signal involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

39. The server of claim 33 wherein the lockout signal applies for a limited amount of time.

40. The server of claim 33 wherein the lockout signal applies for an action lasting a limited amount of time.

41. The server of claim 33 wherein the lockout signal involves presenting new odds on an unresolved proposition.

* * * * *

Exhibit 10

ABOUT WINVIEW TECHNOLOGY, INC.

WinView Technology, Inc. (WVT) is actively seeking exclusive joint-venture partnership within the U.S. mobile and online sports betting industry, to apply WVT's proprietary solutions for competitive advantage. These partnerships are aimed at addressing the industry's most pressing challenges. Leveraging fully patented, cheat-proof streamed sports events, WVT offers micro betting solutions for the U.S. market. Through a partnership model, significant proprietary marketing and revenue generating benefits will be deployed to B2C gaming operators, enhancing the landscape of mobile micro betting in the U.S.

In 2023, the U.S. sports betting industry saw gross revenues surpassing \$11 billion. The landscape presents several challenges: fierce competition among gaming operators for market share of sports bettors and rising acquisition costs for these bettors. The accelerated growth of streaming over broadcast makes micro betting difficult if not impossible. WinView Technology, Inc., offers an exclusive solution providing proprietary enhanced sports betting application features and functionality. This approach aims to offer significant competitive advantage, foster growth in the total market, increase market share, boost revenues per average user and accelerate gross revenues for gaming operator partners.



Under 4 Seconds

Low Cost, High Capacity



100 +

Issued Patents



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2023 U.S. Sports Betting Market



All-In-One Streaming App

WinView Technology, Inc. (WVT) offers proprietary application platform features including ultra-low latency streaming. This patented, innovative approach provides a powerful path to expand the market for sports bettors. WVT also offers a micro betting odds-setting system designed to double the operator's hold. Leveraging WVT's long software development relationship with ExMachina Group based in the Netherlands (www.exmachinagroup.com) WVT taps into their ULL streaming expertise with Livery Video. ExMachina is renowned for developing proven, massive, low-latency synchronized streaming mobile apps, making them the leading development company worldwide in this domain.

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Issued Patents

2023 U.S. Sports Betting Market



All-In-One Streaming App

WinView Technology, Inc. (WVT) offers proprietary application platform features including ultra-low latency streaming. This patented, innovative approach provides a powerful path to expand the market for sports bettors. WVT also offers a micro betting odds-setting system designed to double the operator's hold. Leveraging WVT's long software development relationship with ExMachina Group based in the Netherlands (www.exmachinagroup.com) WVT taps into their ULL streaming expertise with Livery Video. ExMachina is renowned for developing proven, massive, low-latency synchronized streaming mobile apps, making them the leading development company worldwide in this domain.



Main: (704) 559-9720

support@winviewtechnology.com

WinView Technology, Inc.

7804-C Fairview Road, Suite 207

Charlotte, NC 28226

8am - 5pm EST daily

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Exhibit 11

State of New Jersey

OFFICE OF THE ATTORNEY GENERAL
DEPARTMENT OF LAW AND PUBLIC SAFETY
1300 ATLANTIC AVE
ATLANTIC CITY, NJ 08401

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

MATTHEW J. PLATKIN
Attorney General

MARY JO FLAHERTY
Interim Director

Jeff Ifrah, Esq.
IFRAH LAW PLLC
1717 Pennsylvania Ave., NW
Suite 650
Washington, DC 20006

Re: **JOINT PETITION OF PT SERVICES (DELAWARE), LLC AND PT SERVICES (NEW JERSEY), LLC TO CONTINUE TO CONDUCT INTERNET GAMING AND SPORTS WAGERING RELATED BUSINESS PURSUANT TO *N.J.S.A.* 5:12-92a(1) AND *N.J.A.C.* 13:69J-1.2B (PRN 2492402)**

Dear Jeff Ifrah:

The Division of Gaming Enforcement ("Division") has completed its review of PRN 2492402, which seeks authorization to renew PRN 0582404, for PT Services (Delaware), LLC and PT Services (New Jersey), LLC, applicants for casino service industry enterprise ("CSIE") licensure, to continue to conduct internet gaming and sports wagering related business transactions with the following:

1. Marina District Development Company, LLC d/b/a Borgata Hotel Casino & Spa, bwin.party (USA), Inc., and BetMGM, LLC, the latter two of which are CSIE licensees, pursuant to an agreement, which was previously provided to the Division.
2. Boardwalk 1000, LLC d/b/a Hard Rock Hotel & Casino Atlantic City, HR Atlantic City, LLC, and Hillside (New Jersey), LLC d/b/a Bet365, a CSIE licensee, pursuant to an agreement, which was previously provided to the Division.
3. Boardwalk 1000, LLC d/b/a Hard Rock Hotel & Casino Atlantic City, HR Atlantic City, LLC, Continent 8, LLC, and Hillside (New Jersey), LLC d/b/a Bet365, the latter two of which are CSIE licensees, pursuant to agreements, which were previously provided to the Division.
4. AC Ocean Walk, LLC d/b/a Ocean Casino Resort and GW NJ Sports, Inc., a CSIE licensee, pursuant to an agreement, which was previously provided to the Division.
5. DGMB Casino, LLC d/b/a Resorts Casino Hotel and TSG Interactive US Services Limited, an applicant for CSIE licensure, pursuant to an agreement, which was previously provided to the Division.
6. Golden Nugget Atlantic City, LLC and Rush Street Interactive, LLC, a CSIE licensee, pursuant to an agreement, which was previously provided to the Division.



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7. Boardwalk 1000, LLC d/b/a Hard Rock Hotel & Casino Atlantic City, and Seminole Hard Rock Digital, LLC, an applicant for CSIE licensure, pursuant to an agreement, which was previously provided to the Division.
8. DGMB Casino, LLC d/b/a Resorts Casino Hotel and Crown NJ Gaming Inc. d/b/a DraftKings, a CSIE licensee, pursuant to an agreement, which was previously provided to the Division (previously PRN 0582404).
9. AC Ocean Walk LLC d/b/a Ocean Casino Resort and Playstar NJ LLC, an applicant for CSIE licensure, pursuant to an agreement, which was previously provided to the Division (previously PRN 0312402).
10. AC Ocean Walk LLC d/b/a Ocean Casino Resort, pursuant to an agreement, which was previously provided to the Division (previously PRN 0952401).
11. Caesars Interactive Entertainment New Jersey, LLC and GW NJ Sports, Inc., a CSIE licensee, pursuant to an agreement, which was previously provided to the Division (previously PRN 1792404).
12. GMB Casino, LLC d/b/a Resorts Casino Hotel and Resorts Digital Gaming, LLC, an applicant for CSIE licensure, pursuant to an agreement, which was previously provided to the Division (previously PRN 2332402).
13. Golden Nugget Atlantic City, LLC and Betfair Interactive US, LLC, a CSIE licensee, pursuant to an agreement, which was previously provided to the Division (previously PRN 0932401).

Therefore, pursuant to *N.J.S.A. 5:12-92a(1)* and *N.J.A.C. 13:69J-1.2B*, and for good cause shown, internet gaming and sports wagering related business transactions between the petitioner and the above entities are deemed to be approved **for a term to expire on March 14, 2025, subject to the continued approval of all product submissions by the Division's Technical Service Bureau as authorized by the issuance of an Approval Letter by the Director and subject further to the representations contained within the petition. This approval is further subject to each new product submission's approval as required by the Division's Technical Service Bureau. This approval is further subject to the notice requirement set forth in *N.J.A.C. 13:69N-1.11*.** It is further provided that any new business transacted pursuant to this approval be reported to the Division within the time frames set forth in *N.J.A.C. 13:69J-1.2B(a)1iv*. Further, petitioners must maintain and make available for inspection, upon demand by the Division, any records regarding the business transacted. **Moreover, any changes to the current agreement must be reported to the Division within five (5) business days.** The Division may reconsider the granting of this approval at any time.

Sincerely,

Date: *September 13, 2024*


MARY JO FLAHERTY
INTERIM DIRECTOR

c: Jamie A. McKelvey, DAG
Michael J. Golub, DAG
Patrick Madamba, Jr., Esquire
Nicholas F. Moles, Esquire
Jeremy P. Kleiman, Esquire

Lindsey R. Curewitz, Esquire
William J. Downey, Esquire
Nanette L. Horner, Esquire
Pacifico S. Agnellini, Esquire
Joseph Muskett, Esquire
Thomas Pohlman, GNAC
John Donnelly, Esquire
Bessie A. Saco, Esquire
Michael D. Fabius, Esquire
David Gardy Ermann, Esquire
Frank Catania, Esquire

Exhibit 12



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DraftKings Sportsbook at Resorts

DraftKings Sportsbook At Resorts

DraftKings Sportsbook Featuring:

- 5,000 square feet of action
- Ultra-high-definition LED video walls
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- Betting windows
- 15-foot video wall
- Extensive list of sports betting odds available at your fingertips
- View all odds live – no need to rely on preprinted betting sheets
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Betting Hours

Saturday – Thursday | 11AM – 10:30PM
 Friday | 4PM – 10PM
 Betting Kiosks | 24 Hours

SPORTS BETTING GUIDE

View the Sports Betting Guide and FAQs for DraftKings Sportsbook in Atlantic City.

Whatever your experience happens to be, we're here to help you understand and feel comfortable with sports betting odds, terminology, and everything else you need to know to place a bet confidently.

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*Not valid during holidays.

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Thursday | Noon to 8pm
Friday | Noon – 2am
Saturday | Noon to 2am
Sunday | Noon to 8pm

Live Table Games >

BAR MENU & DRINK SPECIALS

Bar Menu

Bar Menu PDF >

updated 7/12/24

Bar Hours

Sunday, January 19 | NOON – MIDNIGHT
Monday | 3PM – 11PM
Tuesday | Closed
Wednesday | Closed
Thursday | NOON – 11PM
Friday | NOON – 2AM
Saturday | NOON – 2AM
Sunday | NOON – 10PM

updated 1/10/25

Thursday- Sunday

\$2 Washington Apple Shots | 5PM-8PM
\$3 Miller Lite & Yuengling Drafts

Football Specials | Available during every 2024 NFL game

\$2 Washington Apple Shots
\$3 Miller Lite & Yuengling Drafts
\$6 Drafts
\$12 Domestic Pitcher
\$20 Bucket of Domestic Bottles

Prices and promotions subject to change.

UPCOMING EVENTS

AWARDS





ATLANTIC CITY WEEKLY
NIGHTLIFE AWARDS



CASINO PLAYER BEST OF
GAMING AWARDS

Brent Celek Meet and Greet | January 28, 2023



Joe Theismann Meet & Greet | August 27, 2022

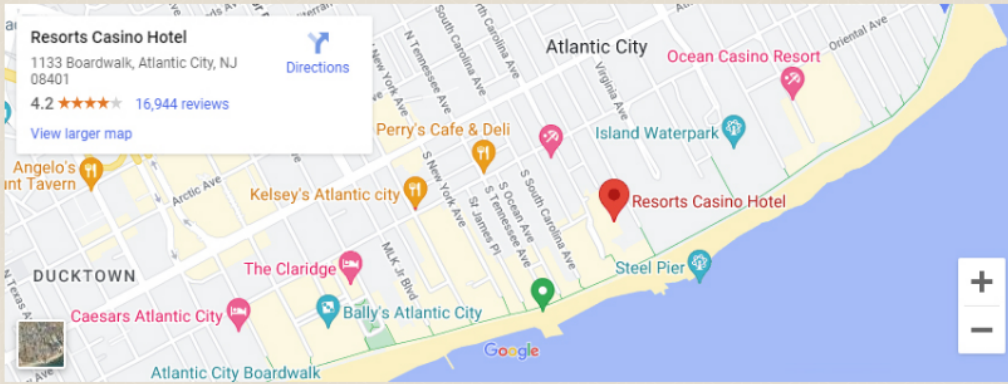


Brian Westbrook Meet and Greet | November 14, 2021





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DraftKings Sportsbook

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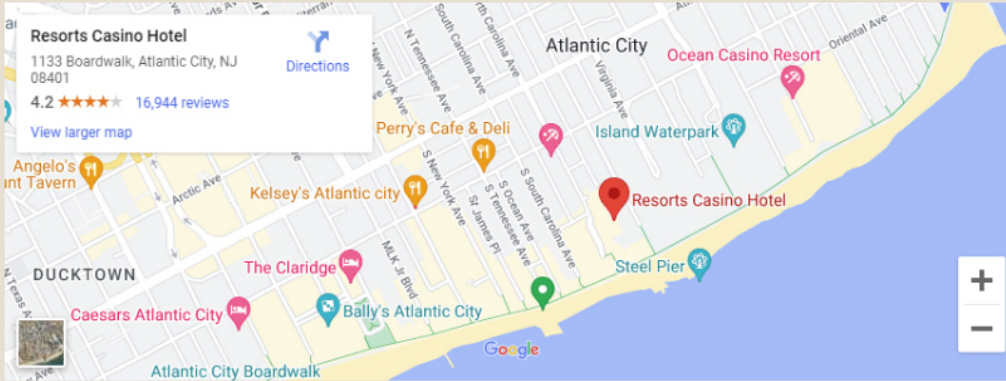
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Exhibit 13

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2023

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____.

Commission file number 001-41379



DRAFTKINGS INC.

(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction of incorporation or organization)

87-2764212

(I.R.S. Employer Identification No.)

222 Berkeley Street, 5th Floor

Boston, MA 02116

(Address of principal executive offices) (Zip Code)

(617) 986-6744

(Registrant's telephone number, including area code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class

Class A Common Stock, \$0.0001 par value

Trading symbol

DKNG

Name of each exchange on which registered

The Nasdaq Stock Market LLC

Securities Registered Pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes ☐ No ☒Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Registration S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

☒

Accelerated filer

☐

Non-accelerated filer

☐

Smaller reporting company

☐

Emerging growth company

☐If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes ☐ No ☒

The aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant as of June 30, 2023, the last business day of the registrant's most recently completed second fiscal quarter, was \$10.9 billion based upon the closing price reported for such date on the Nasdaq Global Select Market.

As of February 14, 2024, there were 473,619,528 shares of the registrant's Class A common stock, par value \$0.0001 per share, and 393,013,951 shares of the registrant's Class B common stock, par value \$0.0001 per share, outstanding.

Documents Incorporated by Reference:

Portions of the registrant's definitive proxy statement for its 2024 Annual Meeting of Stockholders, or the Proxy Statement, to be filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, are incorporated by reference in Part III. Except with respect to information specifically incorporated by reference in this Annual Report, the Proxy Statement shall not be deemed to be filed as part hereof.

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Cautionary Statement Regarding Forward-Looking Statements

This Annual Report on Form 10-K (this “Annual Report”) contains forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995 that reflect future plans, estimates, beliefs and expected performance. The forward-looking statements depend upon events, risks and uncertainties that may be outside of our control. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intends,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “will,” “would,” “forecast,” “propose,” and similar expressions or the negative of these words may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. You are cautioned that our business and operations are subject to a variety of risks and uncertainties, many of which are beyond our control, and, consequently, our actual results may differ materially from those projected.

Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section entitled “Risk Factors” included elsewhere in this Annual Report. Any statements contained herein that are not statements of historical fact may be forward-looking statements.

- factors relating to our business, operations and financial performance, including:
 - our ability to effectively compete in the global entertainment and gaming industries;
 - our ability to successfully acquire and integrate new operations;
 - our ability to obtain and maintain licenses with gaming authorities;
 - our inability to recognize deferred tax assets and tax loss carryforwards;
- market and global conditions and economic factors beyond our control, as well as the potential impact of general economic conditions, including inflation and rising interest rates, on our liquidity, operations and personnel;
- significant competition and competitive pressures from other companies worldwide in the industries in which we operate;
- our ability to raise financing in the future;
- our success in retaining or recruiting officers, key employees or directors; and
- litigation and the ability to adequately protect our intellectual property rights.

Due to the uncertain nature of these factors, management cannot assess the impact of each factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Any forward-looking statement speaks only as of the date on which such statement is made, and we undertake no obligation to update any of these statements to reflect events or circumstances occurring after the date of this Annual Report, except as required by applicable law. New factors may emerge and it is not possible to predict all factors that may affect our business and prospects.

On May 5, 2022 (the “GNOG Closing Date”), DraftKings Inc. (formerly New Duke Holdco, Inc.) consummated the acquisition of Golden Nugget Online Gaming, Inc., a Delaware corporation (together with its subsidiaries unless the context requires otherwise, “GNOG”), pursuant to a definitive agreement and plan of merger, dated August 9, 2021 (the “GNOG Merger Agreement”), in an all-stock transaction (the “GNOG Transaction”). In connection with the GNOG Transaction, DraftKings Inc. undertook a holding company reorganization whereby DraftKings Inc. became the going-forward public company and the direct parent company of both DraftKings Holdings Inc. (formerly DraftKings Inc.), a Nevada corporation (“Old DraftKings”), and GNOG. DraftKings Inc. is the registrant filing this Annual Report on Form 10-K as the successor registrant for Old DraftKings. Unless otherwise indicated or the context otherwise requires, the terms “DraftKings”, the “Company”, “we”, “us” and “our” refer to DraftKings Inc. (or, in respect of periods prior to the GNOG Closing Date, Old DraftKings), together with its consolidated subsidiaries.

Item 1. Business.

Overview

We are a digital sports entertainment and gaming company. We provide users with online sports betting (“Sportsbook”), online casino (“iGaming”) and daily fantasy sports (“DFS”) product offerings, as well as retail sportsbook, media and other consumer product offerings. We are also involved in the design and development of sports betting and casino gaming software for online and retail sportsbooks and iGaming operators.

Our mission is to make life more exciting by responsibly creating the world’s favorite real-money games and betting experiences. We accomplish this by creating an environment where our users can find enjoyment and fulfillment through Sportsbook, iGaming, and DFS, as well as media and other online consumer product offerings. We are also highly focused on our responsibility as a steward of this new era in real-money gaming. Our ethics guide our decision making, with respect to both the tradition and integrity of sports and our investments in regulatory compliance and consumer protection.

We continue to make deliberate and substantial investments in support of our mission and long-term growth. For example, we have invested in our product offerings and technology in order to continuously launch new product innovations; improve marketing, merchandising, and operational efficiency through data science; and deliver a great user experience. We also make significant investments in sales and marketing and incentives to grow and retain our paid user base, including personalized cross-product offers and promotions, and promote brand awareness to attract the “skin-in-the-game” sports fan. Together, these investments have enabled us to create a leading product built on scalable technology, while attracting a user base that has resulted in the rapid growth of our business.

Our priorities are to (a) continue to invest in our product offerings, (b) launch our product offerings in new jurisdictions, (c) create replicable and predictable state-level unit economics in sports betting and iGaming and (d) expand our consumer product offerings. When we launch Sportsbook and iGaming product offerings in a new jurisdiction, we invest heavily in user acquisition, retention and cross-selling until the new jurisdiction provides a critical mass of users engaged across our product offerings.

Our current technology is highly scalable with relatively minimal incremental spend required to launch our product offerings in new jurisdictions. We will continue to manage our fixed-cost base in conjunction with our market entry plans and focus our variable spend on marketing, user experience and support and regulatory compliance to become the product of choice for users and to maintain favorable relationships with regulators. We also expect to improve our profitability over time as our revenue and gross profit expand as states mature, and our variable marketing expenses and fixed costs stabilize or grow at a slower rate.

Our path to profitability on an annual basis is based on the acceleration of positive contribution profit growth driven by increased revenue and gross profit generation from ongoing efficient customer acquisition enabled by the transition from local to regional to national advertising, strong customer retention, improved monetization from frequency and higher hold percentage, as well as scale benefits from investments in our product offerings and technology and general and administrative functions. On a consolidated Adjusted EBITDA basis, we expect to achieve profitability on an annual basis when total contribution profit exceeds the fixed costs of our business, which depends, in part, on the percentage of the U.S. adult population that has access to our product offerings and the other factors summarized in the section entitled “Cautionary Statement Regarding Forward-Looking Statements”.

During the fiscal years ended December 31, 2023, 2022 and 2021, we had revenue of \$3,665.4 million, \$2,240.5 million, and \$1,296.0 million, respectively, average monthly unique payers (“MUPs”) of 2.7 million, 1.9 million, and 1.5 million, respectively, and average revenue per MUP (“ARPMUP”) of \$113, \$96, and \$67, respectively. Refer to the section entitled “Key Performance Indicators” within Management’s Discussion and Analysis of Financial Condition and Results of Operations included herein for additional information regarding our MUPs and ARPMUP.

Our Product Offerings

Our revenues are predominantly generated through our three online gaming product offerings — Sportsbook, iGaming, and DFS. For Sportsbook and iGaming, we operate under both our DraftKings brand and our GNOG brand. We consider these three product offerings to be of a similar product class, and together they accounted for 96%, 94%, and 88% of DraftKings’ revenues for the fiscal years ended December 31, 2023, 2022 and 2021, respectively. DFS, which was our sole product offering until 2018, historically drove our results; however, since we launched Sportsbook and iGaming in 2018, states where Sportsbook and iGaming are operating have accounted for a rapidly growing proportion of our users, which has contributed, in part, to our revenue growth. In addition to our three online gaming product offerings, we also offer non fungible tokens (“NFTs”) on DraftKings Marketplace (“Marketplace”), NFT-based DFS-style contests, gaming software services, and advertising and sponsorship packages to targeted advertisers across our DFS product offering, free games, and media content.

Below is a description of each of our primary product offerings and services:

Online Gaming Product Offerings

Sportsbook - Sportsbook engages consumers in their sports viewing experience. Sports betting involves a user placing a bet by wagering money on an event at fixed odds (“proposition”) determined by DraftKings. In the event the user wins, DraftKings pays out the bet. Our Sportsbook revenue is generated by setting odds that are intended to provide a built-in theoretical margin for each proposition offered to our users. While the actual betting patterns of our users and outcomes of individual events may cause short-term volatility in our revenue and profitability, we believe we can deliver a stable and attractive betting win margin over the long term.

Revenue is realized by taking the settled handle for betting markets that have been resolved and subtracting the payouts for these betting markets such that the difference is our gross revenue, or “hold.”

iGaming - iGaming, or online casino, product offerings typically include the full suite of games available in land-based casinos, such as blackjack, roulette, baccarat and slot machines. For these product offerings, we function similarly to land-based casinos, generating revenue through hold, or gross winnings, as users play against the house. In iGaming, we believe there is typically lower volatility in hold percentage versus land-based casinos since the average return to a player for specific games is easier to predict in advance based on game rules and statistics.

Our iGaming product offering consists of a combination of games that we have built in-house and licensed content from suppliers such as International Gaming Technology, iForium, Light & Wonder Inc., Spin, and Evolution for live dealer services. The latter are subject to standard revenue-sharing agreements specific to each supplier, whereby the supplier receives a percentage of the gaming revenue generated from their respective casino games played utilizing our technology. In exchange, DraftKings receives a limited license to offer the games to users in jurisdictions where use is approved by regulatory authorities. Revenue generated through our self-developed major casino games such as blackjack results in decreased overall revenue share payments as a percent of revenue.

Daily Fantasy Sports - Since our launch, we have monetized our DFS product offering by facilitating peer-to-peer play, whereby contestants compete against each other for prize money. We provide contestants with technology that establishes DFS contests, scores the contests, distributes the prizes and performs other administrative activities to enable the “skin-in-the-game” sports fan experience. Our revenue from DFS consists of the difference between the entry fees collected and the amounts paid out to contestants as prizes in a period.

Other Consumer Product Offerings

Retail Sportsbook - In addition to our online Sportsbook, we also maintain retail distribution in thirteen states, in which our retail revenue is subject to individual agreements with third parties that provide for a revenue share. Retail distribution leverages the foot traffic for existing casino and other properties to convert their customers to engage with our retail sportsbook while on the premises. Similar to our online Sportsbook, retail sportsbook revenue is realized by taking the settled handle for betting markets that have been resolved and subtracting the payouts for these betting markets such that the difference is our gross revenue, or “hold.”

Media, Advertising and Sponsorship - Our advertising packages range from standard ad placements and background ad placements to more high-touch integrations, such as sponsored DFS contest series or custom site takeovers. These are typically served and tracked by a range of advertising methods that have been built directly into our product offerings and feature partnerships with brand categories ranging from entertainment to food to automotive. Each advertising package is bespoke, and we offer each client a custom “menu” of advertising options, which include online media (such as display, video and audio advertisements and page and “skin” sponsorship takeovers), custom content, including branded video content, live events such as sponsored watch parties and sponsored free or paid games, including daily fantasy, pick’em and bracket games. Each advertising package has a different pricing model, with a variety of factors affecting the pricing of a particular package including, but not limited to, (i) the sport to which the package relates and (ii) the demand for, and supply of, the individual package components. Sponsorships and custom-built games and content typically have fixed fee pricing. Other packages, such as custom-branded video content or online advertisements, are sold with a guaranteed number of impressions, which are priced per a certain number of guaranteed impressions. Each time a consumer sees an advertisement while playing, watching, reading or listening to a piece of content or playing a game, an impression is counted.

DraftKings Marketplace - We launched DraftKings Marketplace during the third quarter of 2021. Marketplace is a NFT ecosystem designed for mainstream accessibility that offers curated initial NFT drops (“Primary Sales”) and allows owners of NFTs on Marketplace to list their NFTs for sale to other Marketplace customers (“Secondary Sales”). Once marked for sale with a chosen selling price, the NFT will appear on the Marketplace secondary market. Customers can browse all available NFTs within the secondary market and can opt to purchase based on the selling price. The revenue we earn on Primary Sales and Secondary Sales is based on a specific percentage of the gross value of each such sale. We also offer NFT-based DFS-style contests through our Reignmakers franchise.

Gaming Software Services

We supply business-to-business sports betting and iGaming services globally, primarily in Europe and the United States, for various gaming operators and government-run lotteries. Our gaming software services are primarily comprised of the operations of SBTech (Global) Limited (“SBTech”), which we acquired on April 23, 2020, with principal activities involving the design and development of sports betting and casino gaming software. Our services are delivered through our proprietary software, and our complementary service offerings include trading and risk management and support for reporting, customer management and regulatory reporting requirements. Our gaming software services generate revenue from operators by providing sports betting and integration to iGaming content directly to operators in exchange for a share of operators’ revenues.

Offsetting the revenues attributable to our Sportsbook, iGaming, DFS, and Marketplace product offerings is the portion of gross revenue that we allocate to new and existing user incentives and promotions, which are awarded as a result of game play or at our discretion, through loyalty programs, free plays, deposit bonuses, discounts, rebates or other rewards and incentives. These offsets can be redeemed across multiple product offerings and are generally used to acquire new users, reactivate prior users and increase monetization from active users; therefore, these offsets are not directly attributable to a specific product offering, but rather attributable at a customer level. We leverage our return-on-investment models that are based on gross profit paybacks, lifetime value, player segmentation and customer and revenue retention to determine appropriate promotional levels.

Seasonality

Our business experiences seasonality primarily based on the relative popularity of certain sports. Although sporting events occur throughout the year, our users are typically most active in the fourth quarter due to the overlapping calendars of the NFL and NBA seasons, which are the most popular sports on our Sportsbook product offering.

Our Technology and Product Development

In order to build the best real-money games and product offerings, we have invested in core disciplines across our technology, analytics and marketing, which have allowed us to rapidly innovate and bring new experiences to market while gaining a unique understanding of our users. The result has been leadership in our industry, fueled by a brand reputation and a depth of user trust that we believe has set us apart from our competitors.

Our product offerings are comprised of varying levels of proprietary and third-party software. Our DraftKings-branded product offerings are bound together with a common account management and regulatory compliance service and can be accessed with the same account and wallet. Across our product offerings, we have endeavored to own the technology in-house for any critical component and to utilize a combination of technologies, including data science and machine learning, to optimize conversion and efficiency.

DraftKings' core product offerings are built on top of integrated, proprietary account management technology. This technology provides our users with access to their account history across all DraftKings-branded product offerings and a uniform identity verification system, which is critical to enabling seamless navigation from our national DFS audience to our DraftKings-branded Sportsbook and iGaming product offerings and vice versa, as existing users need not manage a separate set of account credentials and payment methods for each product offering. Our users also enjoy a highly functional wallet which, in many cases, permits user funds to flow freely from product offering to product offering. The technology is certified to safely store user payment information, which reduces our dependency on any particular payment processor, provides redundancy and gives us the flexibility to route our payment volume to a processor of our choosing. In addition, our technology is built to be customizable to the specific regulations of individual jurisdictions.

Across our product offerings, we actively use data science and machine learning to help optimize conversion and monetization. Within our DFS product offering, data science algorithms are used to customize a contestant's home screen based upon his or her past entry history. We build recommendations by identifying the type of contests that a contestant is most likely to enter, along with the entry fee and prize structure that he or she will find most appealing. In addition, contest-pacing algorithms identify contests that might present a financial exposure and increase the contests' visibility within the product appropriately. Similarly, within our Sportsbook product offering, recommendation engines are used to present betting markets to users based upon their past play history and location. These services are also critical to our back-end infrastructure, as they drive key elements of our fraud and compliance program.

Marketing

User Acquisition and Retention - Our ability to effectively market is paramount to our operational success. Utilizing a blend of analytics and data science as our foundation, we leverage our marketing to acquire, retain and reactivate users while building a trusted consumer-facing brand. We use a variety of free and paid marketing channels, in combination with compelling offers and exciting games, to achieve our objectives. Furthermore, we optimize our marketing spend using data collected since the beginning of our operations, as well as additional data that we collect from vendors, partners and data providers. Our marketing spend is based on a return-on-investment model that considers a variety of factors, including the performance of different marketing channels, predicted lifetime value and behavior of users across various product offerings, the location of our users and our estimate of when enabling legislation and regulations for sports betting and iGaming may come to fruition.

Where paid marketing is concerned, we leverage a broad array of advertising channels, including television, radio, social media platforms such as Facebook, Instagram, X and Snapchat, affiliates and paid and organic search, and other digital channels such as mobile display. For Sportsbook and iGaming, these efforts are concentrated within the specific jurisdictions that have passed enabling legislation and regulations, and in which we operate or intend to operate (which vary on a per-offering basis). Our marketing expenditures tend to be highly seasonal, with most spend correlating with the start of a sports season and during its playoffs and championships.

In addition to traditional paid advertising channels, we cross-promote our product offerings to our existing user base through internal channels such as mobile push notifications, email and text messages, and external channels such as Facebook, Twitter, Instagram and Snapchat. Through those channels, we use a combination of content, contests and promotions to engage existing users. Additionally, we incentivize our users to refer new users through our "Refer-a-Friend" program, offering incentives such as free entries into tournaments or free bets if the referred user ultimately interacts with our product offerings.

League, Team, and Media Relationships - We engage in relationships with sports leagues, including the NFL, NBA, MLB, NHL, and UFC, and professional sports teams to improve our brand awareness, improve user retention and create unique collaborative integrations for our users.

We also engage in relationships with media partners including Amazon, which selected DraftKings as a sponsor and official pre-game odds provider for Thursday Night Football ("TNF") on Prime Video in September 2022. Under the multi-year agreement, TNF on Prime Video will feature DraftKings integrations in its live pregame, including odds and

additional sports betting insights, as well as other TNF-themed offerings. We also have established partnerships with media entities like Meadowlark Media and iHeartMedia as we seek to grow our audience of U.S. sports fans and potential users.

Distribution

We distribute our Sportsbook, iGaming, DFS and Marketplace product offerings through various channels, including traditional websites, direct app downloads and global direct-to-consumer digital platforms such as the Apple App Store and the Google Play store. These two digital platforms are the main distribution channels for our product offerings. Our DFS product offering is delivered as a free application through both the Apple App Store and Google Play Store and is also accessible via mobile and traditional websites. Our Sportsbook and iGaming product offerings are primarily distributed through the Apple App Store and a traditional website. We allow our Android Sportsbook and iGaming users to install our Sportsbook and iGaming product offerings through the Google Play Store and our website. We derive nearly all of our revenue through product offerings distributed via the Apple App Store, Google Play Store and via traditional websites. For all of our product offerings, neither Apple nor Google take any revenue share for distribution.

For our gaming software services, Sportsbook and iGaming product offerings and services are distributed online via the Apple App Store, Google Play Store and traditional websites by operators that have licensed such products and services directly from us, while retail product offerings and services are distributed primarily via self-service betting terminals and standalone computer terminals. Similarly, Apple and Google do not take any revenue share for distributing those product offerings and services.

Intellectual Property

Our business substantially relies on the creation, acquisition, use and protection of intellectual property. Some of this intellectual property is in the form of software code, patented technology and trade secrets that we use to develop and properly run our Sportsbook, iGaming, and DFS product offerings and related services. We also create intellectual property that includes proprietary sports betting, iGaming, and DFS-related technology and content, as well as proprietary data acquired from the use of those product offerings.

While most of the intellectual property we use is created by us, we have obtained rights to use the intellectual property of third parties through licenses and service agreements with those third parties. Although we believe these licenses are sufficient for the operation of the Company, these licenses typically limit our use of the third parties' intellectual property to specific uses and for specific time periods.

We protect our intellectual property rights by relying on federal, state and common law rights, as well as contractual restrictions. We control access to our proprietary technology by entering into confidentiality and invention assignment agreements with our employees and contractors, and confidentiality agreements with third parties. We also engage in monitoring the activities of third parties with respect to potential infringing uses of our intellectual property by third parties.

We actively seek patent protection covering inventions originating from us and, from time to time, review opportunities to acquire patents to the extent we believe such patents may be useful or relevant to our business.

In addition to these contractual arrangements, we also rely on a combination of trade secret, copyright, trademark, trade dress, domain name and patents to protect our product offerings and other intellectual property. We typically own the copyright to the software code to our content, as well as trademarks under which our Sportsbook, iGaming, and DFS product offerings and related services are marketed. We pursue the registration of our domain names, trademarks, and service marks in the United States and in locations outside the United States. Our registered trademarks in the United States include "DraftKings," and the names of certain of our services and applications, among others.

Competition

We operate in the global entertainment and gaming industries, primarily with our Sportsbook, iGaming, DFS, and Marketplace product offerings. Our users face a vast array of entertainment choices. Other forms of entertainment, such as television, movies, sporting events and in-person casinos, are more well established and may be perceived by our users to offer greater variety, affordability, interactivity and enjoyment. We compete with these and other forms of entertainment for the discretionary time and income of our users.

The specific industries in which we operate are characterized by dynamic customer demand and technological advances, and there is significant competition among online gaming and entertainment providers. A number of established, well-financed

companies producing online gaming and/or interactive entertainment products and services compete with our product offerings, and other well-capitalized companies may introduce competitive services. There has also been consolidation among competitors in the entertainment and gaming industries and such consolidation and future consolidation could result in the formation of larger competitors with increased financial resources and altered cost structures, which may enable them to offer more competitive products, gain larger market share, expand their product offerings and broaden their geographic scope of operations.

Human Capital Resources

As a multinational technology company with over 4,400 employees located in six countries, our business success is driven by our highly skilled workforce. With our global technology and product team consisting of over 1,900 employees (which includes over 1,400 engineers), we are well positioned to deliver new, innovative and exciting products to our growing base of customers.

At DraftKings, we recognize that engaging and developing our employees is a key to our success and we rely on attracting and retaining our talent to deliver on DraftKings' goal to be a leader in today's fast-growing global entertainment and gaming industries. We routinely measure our employees' level of engagement and satisfaction through a comprehensive annual engagement survey followed by quarterly pulse surveys. These surveys ensure we hear directly from our valuable employees on how we can better focus on the following areas: (i) alignment with DraftKings' mission/vision and in-role clarity, (ii) manager effectiveness, (iii) growth opportunities, (iv) inclusion, equity and belonging, (v) work-life balance, (vi) rewards and recognition, (vii) enablement and (viii) overall satisfaction.

We have committed to and formalized employee development programs that support inclusion, equity and belonging, and promote creativity and innovation through various leadership and talent management programs. DraftKings' talent training programs are designed to provide increased career and internal mobility for our employees, identify development opportunities, and proactively support succession planning.

We also offer our employees a holistic total rewards package with competitive compensation and premier health and welfare programs for employees and their dependents. In addition, most full-time employees receive an equity award upon hire and are also eligible for equity awards on a recurring basis to align compensation with long-term stockholder interests and to allow them to participate in the Company's financial success. Our paid time off programs enable our workforce to enjoy personal time away from their job responsibilities.

Government Regulation

DraftKings is subject to various U.S. and foreign laws and regulations that affect our ability to operate our Sportsbook, iGaming, and DFS product offerings. These product offerings are generally subject to extensive and evolving regulations that could change based on political and social norms and that could be interpreted in ways that could negatively impact our business.

The gaming industry (inclusive of our Sportsbook and iGaming product offerings) is highly regulated and we must maintain licenses and pay gaming taxes or a percentage of revenue where required by the jurisdictions in which we operate in order to continue our operations. Our business is subject to extensive regulation under the laws, rules and regulations of the jurisdictions in which we operate. These laws, rules and regulations generally concern the responsibility, financial stability, integrity and character of the owners, managers and persons with material financial interests in the gaming operations along with the integrity and security of sports betting and iGaming product offerings. Violations of laws or regulations in one jurisdiction could result in disciplinary action in that and other jurisdictions.

Gaming laws are generally based upon declarations of public policy designed to protect gaming consumers and the viability and integrity of the gaming industry. Gaming laws also may be designed to protect and maximize state and local tax revenues, as well as to enhance economic development and tourism. To accomplish these public policy goals, gaming laws establish stringent procedures to ensure that participants in the gaming industry meet certain standards of character and responsibility.

Licensing and Suitability Determinations

In order to operate in certain jurisdictions, we must obtain either a temporary or permanent license or determination of suitability from the responsible authorities. We seek to ensure that we obtain all necessary licenses and approvals to develop and put forth our product offerings in the jurisdictions in which we operate and where our users are located.

Gaming laws in certain jurisdictions require DraftKings Inc., and each of its subsidiaries engaged in gaming operations, certain of our directors, officers and employees, and in some cases, certain of our stockholders, to obtain licenses from gaming authorities. Such licenses typically require a determination that the applicant qualifies or is suitable to hold the license. When determining whether to grant such a license to an applicant, gaming authorities generally consider: (i) the financial stability, integrity and responsibility of the applicant (including verification of the applicant's sources of funding); (ii) the quality and security of the applicant's online real-money gaming platform, hardware and related software (including the platform's ability to operate in compliance with local regulation, as applicable); (iii) the applicant's history; (iv) the applicant's ability to operate its gaming business in a socially responsible manner; and (v) in certain circumstances, the effect on competition.

Gaming authorities may, subject to certain administrative procedural requirements, (i) deny an application, or limit, condition, revoke or suspend any license issued by them; (ii) impose fines, either on a mandatory basis or as a consensual settlement of regulatory action; (iii) demand that named individuals or stockholders be disassociated from a gaming business; and (iv) in serious cases, liaise with local prosecutors to pursue legal action, which may result in civil or criminal penalties.

Events that may trigger revocation of such a gaming license or another form of sanction vary by jurisdiction. However, typical events include, among others: (i) conviction in any jurisdiction of certain persons with an interest in, or key personnel of, the licensee of an offense that is punishable by imprisonment or may otherwise cast doubt on such person's integrity; (ii) failure without reasonable cause to comply with any material term or condition of the gaming license; (iii) declaration of, or otherwise engaging in, certain bankruptcy, insolvency, winding-up or discontinuance activities, or an order or application with respect to the same; (iv) obtaining the gaming license by a materially false or misleading representation or in some other improper way; (v) violation of applicable anti-money laundering or terrorist financing laws or regulations; (vi) failure to meet commitments to users; (vii) failure to pay in a timely manner all gaming or betting taxes or fees due; or (viii) determination by the gaming authority that there is another material and sufficient reason to revoke or impose another form of sanction upon the licensee.

Product-Specific Licensing

Sportsbook

As of February 13, 2024, 35 U.S. states, the District of Columbia and Puerto Rico have legalized some form of sports betting. Of those 37 legal jurisdictions, 32 have legalized online sports betting. Of those 32 jurisdictions, 31 are live, and DraftKings operates in 24 of them. As of February 13, 2024, we operate our online sports betting product offering via the DraftKings Sportsbook app in Arizona, Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Tennessee, Vermont, Virginia, West Virginia, Wyoming and Ontario, Canada pursuant to our licenses, temporary licenses, or executed vendor agreements granted by the gaming or lottery commission of such states, specifically, the Arizona Department of Gaming, State of Colorado Department of Revenue Division of Gaming, State of Connecticut Department of Consumer Protection, the Illinois Gaming Board, the Indiana Gaming Commission, the Iowa Racing and Gaming Commission, the Kansas Racing and Gaming Commission, the Louisiana Gaming Control Board, the Maine Gambling Control Unit, the Maryland Lottery and Gaming Control Agency, the Massachusetts Gaming Commission, the Michigan Gaming Control Board, the New Hampshire Lottery Commission, the New Jersey Division of Gaming Enforcement, the New York State Gaming Commission, the Ohio Casino Control Commission, the Oregon State Lottery, the Pennsylvania Gaming Control Board, the Tennessee Sports Wagering Council, the Vermont Department of Liquor and Lottery, the Virginia Lottery, the West Virginia Lottery Commission, and the Wyoming Gaming Commission. Additionally, DraftKings operates its online sports betting product offering in the Canadian province of Ontario pursuant to a registration approved by the Alcohol and Gaming Commission of Ontario.

In addition to our DraftKings-branded sports betting product offering, we operate our GNOG-branded online sports betting product offering via the GNOG Sportsbook app in Arizona and New Jersey pursuant to our licenses granted by the respective state's gaming or lottery commission as described above.

We also operate retail sportsbooks in Arizona, Colorado, Connecticut, Illinois, Iowa, Kansas, Kentucky, Louisiana, Michigan, Mississippi, New Hampshire, New Jersey and Washington pursuant to state and/or tribal regulatory regimes.

On May 14, 2018, the U.S. Supreme Court issued an opinion determining that the Professional and Amateur Sports Protection Act ("PASPA") was unconstitutional. PASPA prohibited certain states from "authorizing by law" any form of

sports betting. In striking down PASPA, the U.S. Supreme Court opened the potential for state-by-state authorization of sports betting. Several states and territories, including Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Dakota, Tennessee, Vermont, Virginia, Washington, Washington, D.C., West Virginia, and Wyoming already have laws authorizing and regulating some form of sports betting online or in brick-and-mortar establishments. Sports betting in the United States is subject to additional laws, rules and regulations at the state level. See “Risk Factors — Risk Factors Relating to our Business and Industry — Our business is subject to a variety of U.S. and foreign laws, many of which are unsettled and still developing and which could subject us to claims or otherwise harm our business. Any change in existing regulations or their interpretation, or the regulatory climate applicable to our products and services, or changes in tax rules and regulations or interpretation thereof related to our products and services, could adversely impact our ability to operate our business as currently conducted or as we seek to operate in the future, which could have a material adverse effect on our financial condition and results of operations.”

iGaming

As of February 13, 2024, we operate our DraftKings-branded iGaming product offering in New Jersey pursuant to a transactional waiver granted by the New Jersey Division of Gaming Enforcement, in Connecticut pursuant to a license granted by the State of Connecticut Department of Consumer Protection, in Michigan pursuant to a license granted by the Michigan Gaming Control Board, in the Canadian Province of Ontario pursuant to a license granted by the Alcohol and Gaming Commission of Ontario, in Pennsylvania pursuant to a license granted by the Pennsylvania Gaming Control Board, and in West Virginia pursuant to a license granted by the West Virginia Lottery. In addition, we operate our GNOG-branded iGaming product offering in Michigan, New Jersey, Pennsylvania and West Virginia, subject to licenses or transactional waiver issued by the Michigan Gaming Control Board, the New Jersey Division of Gaming Enforcement, Pennsylvania Gaming Control Board and the West Virginia Lottery, respectively.

Generally, online gambling in the United States is only lawful when specifically permitted under applicable state law. At the federal level, several laws provide federal law enforcement with the authority to enforce and prosecute gambling operations conducted in violation of underlying state gambling laws. These enforcement laws include the Unlawful Internet Gambling Enforcement Act (the “UIGEA”), the Illegal Gambling Business Act and the Travel Act. No violation of the UIGEA, the Illegal Gambling Business Act or the Travel Act can be found absent a violation of an underlying state law or other federal law.

In addition, the Wire Act of 1961 (the “Wire Act”) provides that anyone engaged in the business of betting or wagering knowingly using a wire communication facility for the transmission in interstate or foreign commerce of bets or wagers or information assisting in the placing of bets or wagers on any sporting event or contest, or for the transmission of a wire communication which entitles the recipient to receive money or credit as a result of bets or wagers, or for information assisting in the placing of bets or wagers, may be fined or imprisoned, or both. However, the Wire Act notes that it shall not be construed to prevent the transmission in interstate or foreign commerce of information for use in news reporting of sporting events or contests, or for the transmission of information assisting in the placing of bets or wagers on a sporting event or contest from a state or foreign country where betting on that sporting event or contest is legal into a state or foreign country in which such betting is legal. Although there was previous litigation in the First Circuit as to whether the Wire Act applied beyond sports betting, on January 20, 2021, the United States Court of Appeals for the First Circuit held, among other things, that the Wire Act’s prohibitions are limited to bets or wagers on sporting events or contests.

Daily Fantasy Sports

As of February 13, 2024, our DFS product offering is available in 44 U.S. states, the District of Columbia, certain provinces in Canada and the United Kingdom. In those states that currently require a license or registration for DFS operations, DraftKings has either obtained the appropriate license or registration or a provisional license from the relevant regulatory authority or is operating pursuant to a grandfathering clause that allows operation pending the availability of licensing applications and subsequent grant of a license. DraftKings also has a foreign DFS license in the United Kingdom. Various state laws and regulations govern our licenses, but generally such state laws and regulations define paid fantasy sports, establish the rules concerning the application and licensure procedures for gaming operators in the fantasy sports business and regulate practices for paid fantasy sports deemed to be detrimental to the public interest. As part of the licensing process, we must submit, in some jurisdictions, extensive materials on our operations, including our technology and data security, age verification of contestants, segregation of account funds and responsible gaming initiatives.

In the United States, our DFS licenses are generally granted for a predetermined period of time (typically ranging from one to four years) or require documents to be supplied on a regular basis in order to maintain our licenses.

Outside the United States, we maintain a DFS license in the United Kingdom. In the United Kingdom, online gaming and sports betting is subject to the Gambling Act 2005 (the “GA2005”), as amended by the Gambling (Licensing and Advertising) Act 2014, and the regulations promulgated thereunder. Under the GA2005, entities wishing to offer online sports betting (which for purposes of GA2005 is defined to include DFS) and/or online casino services to persons located in the United Kingdom must first obtain a remote gambling operating license from the Gambling Commission. We hold a remote-pool-betting operating license authorizing us to offer our DFS product offering to residents of the United Kingdom. That license may be varied to add further product categories permitting, for example, fixed-odds-sports betting and online casinos. We also hold a gambling software operating license issued by the Gambling Commission, which authorizes us to develop the DFS software we use. Our British licenses are not limited by a term, subject to the payment of annual fees and compliance with license conditions.

Gaming Software

Our gaming software services, formerly the operations of SBTech, are licensed in various states in the United States and in the United Kingdom, Sweden, and Belgium. Additionally, our gaming software is certified in multiple regulated jurisdictions in accordance with local licenses held by operators utilizing our gaming software in these jurisdictions.

As of February 13, 2024, we supplied our SBTech gaming software to U.S operators in Arizona, Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, Tennessee, Virginia, West Virginia, and Wyoming, and we supplied retail sportsbook gaming software services in Arizona, Colorado, Connecticut, Illinois, Iowa, Kansas, Louisiana, Michigan, Mississippi, New Hampshire, New Jersey and Washington pursuant to state and/or tribal regulatory regimes.

Data Protection and Privacy

In addition to our licensing regime for our product offerings, we also take significant measures to protect users’ privacy and data. Our programs are described in further detail below.

Because we handle, collect, store, receive, transmit and otherwise process certain personal information of our users and employees, we are subject to U.S. federal and state laws and foreign laws related to the privacy and protection of such data, and we may also face particular privacy, data security and data protection risks in connection with requirements under the amended California Consumer Privacy Act and its implementing regulations, Virginia’s Consumer Data Protection Act, the General Data Protection Regulation of the European Union (EU) 2016/679 (the “GDPR”), and other data protection regulations. Any failure to comply with these rules may result in regulatory fines or penalties including orders that require us to change the way we process data. In the event of a data breach, we are also subject to breach notification laws in the jurisdictions in which we operate, including under the GDPR, and the risk of litigation and regulatory enforcement actions.

Any significant change to applicable laws, regulations, interpretations of laws or regulations, or market practices, regarding the use of personal data, or regarding the manner in which we seek to comply with applicable laws and regulations, could require us to make modifications to our product offerings, services, policies, procedures, notices, and business practices, including potentially material changes. Such changes could potentially have an adverse impact on our business.

Compliance

We have developed and implemented an internal compliance program to help ensure that we comply with legal and regulatory requirements imposed on us in connection with our Sportsbook, iGaming and DFS product offerings. Our compliance program focuses on, among other things, reducing and managing problematic gaming and providing tools to assist users in making educated choices related to gaming activities.

Our gaming software services have been built from the ground up to meet the needs of differing regulatory regimes, including configurable regulatory and responsible gaming controls such as responsible gaming tests, operator alerts on player behavior, deposit limits, betting limits, loss limits, timeout facilities, session limits, reality checks, balance thresholds and intended gaming amounts. These features allow the operators’ customers to control their gaming and play responsibly.

Responsible and Safer Gaming

We view the safety and welfare of our users as critical to our business and have made associated investments in our processes and systems. We are committed to industry-leading responsible gaming practices and seek to provide our users with the resources and services they need to play responsibly. Additionally, all of our employees take responsible gaming training with mandatory periodic refresher training, overseen by our compliance team.

Available Information

Our Internet address is www.DraftKings.com. Our website and the information contained therein or linked thereto are not part of this Annual Report. We make available free of charge through our internet website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, registration statements and amendments to those reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as soon as reasonably practicable after we electronically file such material with, or furnish them to the U.S. Securities and Exchange Commission (the "SEC"). The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC. These materials may be obtained electronically by accessing the SEC's website at www.sec.gov.

Item 1A. Risk Factors.

Our business is subject to numerous risks and uncertainties that you should be aware of in evaluating our business. If any such risks and uncertainties actually occur, our business, prospects, financial condition and results of operations could be materially and adversely affected. The risks described below are not the only risks that we face. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial, may also materially adversely affect our business, prospects, financial condition and results of operations. The risk factors described below should be read together with the other information set forth in this Annual Report, including our consolidated financial statements and the related notes, as well as in other documents that we file with the SEC.

Summary of Material Risk Factors

Our business is subject to a number of risks, which are discussed more fully below and include, but are not limited to, the following:

- There is significant competition within the global entertainment and gaming industries and our existing and potential users may be attracted to competing forms of entertainment such as television, movies and sporting events, as well as other entertainment and gaming options on the Internet. If our product offerings do not continue to be popular, our business could be harmed.
- Reductions in discretionary consumer spending could have an adverse effect on our business, financial condition, results of operations and prospects.
- Our projections are subject to significant risks, assumptions, estimates and uncertainties, including assumptions regarding future legislation and changes in regulations, both inside and outside of the United States. As a result, our projected revenues, market share, expenses and profitability may differ materially from our expectations.
- The success, including win or hold rates, of existing or future sports betting and iGaming product offerings depends on a variety of factors, including sport outcomes, and is not completely controlled by us.
- We rely on information technology and other systems and services, and any failures, errors, defects or disruptions in our systems or services could diminish our brand and reputation, subject us to liability, disrupt our business, affect our ability to scale our technical infrastructure and adversely affect our operating results and growth prospects. Our games and other software applications and systems, and the third-party platforms upon which they are made available could contain undetected errors.
- Despite our security measures, our information technology and infrastructure are vulnerable to attacks by hackers or breaches due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen, which could damage our reputation, cause a loss of confidence in our product offerings or services, or otherwise adversely affect our business.
- We rely on strategic relationships with casinos, tribes and horse-tracks in order to be able to offer our Sportsbook and iGaming product offerings in certain jurisdictions. If we cannot establish and manage such relationships with such partners, our business, financial condition and results of operations could be adversely affected.

- Our business model depends upon the continued compatibility between our apps and the major mobile operating systems and upon third-party platforms for the distribution of our product offerings. If Google Play or the Apple App Store prevents users from downloading our apps or augments the restrictions on advertising to our users, our ability to grow our revenue, profitability and prospects may be adversely affected.
- We may invest in or acquire other businesses, and our business may suffer if we are unable to successfully integrate acquired businesses into our Company or otherwise manage the growth and complexity associated with multiple acquisitions.
- Our business is subject to a variety of U.S. and foreign laws, many of which are unsettled and still developing and which could subject us to claims or otherwise harm our business. Any change in existing regulations or their interpretation, or the regulatory climate applicable to our product offerings and services, or changes in tax rules and regulations or interpretation thereof related to our product offerings and services, could adversely impact our ability to operate our business as currently conducted or as we seek to operate in the future, which could have a material adverse effect on our financial condition and results of operations.
- Our growth prospects depend on the legal status of real-money gaming in various jurisdictions, predominantly within the United States, and legalization may not occur in as many jurisdictions as we expect, or may occur at a slower pace than we anticipate. Additionally, even if jurisdictions legalize real-money gaming, this may be accompanied by legislative or regulatory restrictions and/or taxes that make it impracticable or less attractive to operate in those jurisdictions, or the process of implementing regulations or securing the necessary licenses to operate in a particular jurisdiction may take longer than we anticipate, or existing laws or regulations may be changed or interpreted adversely, any of which could adversely affect our future results of operations and make it more difficult to meet our expectations for financial performance.
- Our growth prospects and market potential will depend on our ability to obtain licenses to operate in a number of jurisdictions, and if we fail to obtain and subsequently maintain such licenses, our business, financial condition, results of operations and prospects could be impaired.
- We have been, and continue to be, the subject of governmental investigations and inquiries with respect to the operation of our businesses, and we could be subject to future governmental investigations and inquiries, legal proceedings and enforcement actions. Any such investigation, inquiry, proceeding or action, could adversely affect our business.
- Negative events or negative media coverage relating to, or a declining popularity of, sports betting, online sports betting, daily fantasy sports, or the underlying sports or athletes, or iGaming, or other negative coverage may adversely impact our ability to retain or attract users, which could have an adverse impact on our business.
- Due to the nature of our business, we are subject to taxation in a number of jurisdictions and changes in, or new interpretations of, tax laws, tax rulings or their application by tax authorities could result in additional tax liabilities and could materially affect our financial condition and results of operations. We have been, and continue to be, subject to periodic audits and examinations by the Internal Revenue Service (the “IRS”), as well as state and local taxing authorities, the results of which may materially impact our financial statements in the period in which the audit or examination occurs.
- The trading price of our Class A common stock has been, and will likely continue to be, volatile and you could lose all or part of your investment.
- Because we are a “controlled company” under The Nasdaq Stock Market listing standards, our stockholders may not have certain corporate governance protections that are available to stockholders of companies that are not controlled companies.
- Our dual class structure has the effect of concentrating voting power with our Chief Executive Officer and Chairman, which limits an investor’s ability to influence the outcome of important transactions, including a change in control.

The summary risk factors described above should be read together with the text of the full risk factors below and the other information set forth in this Annual Report, including our consolidated financial statements and the related notes, as well as in other documents that we file with the SEC. If any such risks and uncertainties actually occur or are further aggravated, our business, prospects, financial condition and results of operations could be materially and adversely affected. The risks summarized above or described in full below are not the only risks that we face. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial may also materially adversely affect our business, prospects, financial condition and results of operations.

Risk Factors Relating to Our Business and Industry

There is significant competition within the global entertainment and gaming industries and our existing and potential users may be attracted to competing forms of entertainment such as television, movies and sporting events, as well as other entertainment and gaming options on the Internet. If our product offerings do not continue to be popular, our business could be harmed.

We operate in the global entertainment and gaming industries with our Sportsbook, iGaming and DFS product offerings and our gaming software services. Our users face a vast array of entertainment choices. Other forms of entertainment, such as television, movies, sporting events and in-person casinos, are more well-established and may be perceived by our users to offer greater variety, affordability, interactivity and enjoyment. We compete with these other forms of entertainment for the discretionary time and income of our users. If we are unable to sustain sufficient interest in our Sportsbook, iGaming and DFS product offerings in comparison to other forms of entertainment, including new forms of entertainment, our business model may not continue to be viable.

The specific industries in which we operate are characterized by dynamic customer demand and technological advances, and there is significant competition among online gaming and entertainment providers. A number of established, well-financed companies producing online gaming and/or interactive entertainment products and services compete with our product offerings, and other well-capitalized companies may introduce competitive services. Such competitors may spend more money and time on developing and testing products and services, undertake more extensive marketing campaigns, adopt more aggressive pricing or promotional policies or otherwise develop more commercially successful products or services than ours, which could negatively impact our business. Our competitors may also develop products, features, or services that are similar to ours or that achieve greater market acceptance. Such competitors may also undertake more far-reaching and successful product development efforts or marketing campaigns, or may adopt more aggressive pricing policies. Furthermore, new competitors, whether licensed or not, may enter the gaming industry. There has also been considerable consolidation among competitors in the entertainment and gaming industries and such consolidation and future consolidation could result in the formation of larger competitors with increased financial resources and altered cost structures, which may enable them to offer more competitive products, gain a larger market share, expand product offerings and broaden their geographic scope of operations. If we are not able to maintain or improve our market share, or if our product offerings do not continue to be popular, our business could suffer.

Economic downturns and political and market conditions beyond our control could adversely affect our business, financial condition and results of operations.

Our financial performance is subject to global and U.S. economic conditions and their impact on levels of spending by users and advertisers. Economic recessions have had, and may continue to have, far reaching adverse consequences across many industries, including the global entertainment and gaming industries, which may adversely affect our business and financial condition.

The global and U.S. economies experienced tepid growth immediately following the global financial crisis in 2008 – 2009 and more recently experienced a period of increased volatility during the global COVID-19 pandemic. Ongoing or intensifying economic weakness, including recessions, economic slowdowns, uncertainties in the global financial markets and other adverse economic conditions, including inflation, changes in monetary policy and increased interest rates, or other changes in economic and political conditions may result in a material adverse effect on our business, financial condition, results of operations or prospects.

In addition, changes in general market, economic and political conditions in domestic and foreign economies or financial markets, including fluctuation in stock markets resulting from, among other things, trends in the economy as a whole may

reduce users' disposable income and advertisers' budgets. Any one of these changes could have a material adverse effect on our business, financial condition, results of operations or prospects.

Certain of our operations are in non-U.S. jurisdictions and are subject to the economic, political, regulatory, and other risks of international operations.

We conduct business in numerous countries that carry high levels of currency, political, compliance and economic risk. For example, we have offices in Ukraine and Israel, and the military conflict between Russia and Ukraine and the evolving conflict in Israel and Gaza and any business interruptions or other spillover effects from such conflicts could adversely affect our operations. Operations in non-U.S. jurisdictions can present many risks, including volatility in gross domestic product and rates of economic growth, financial and governmental instability, cultural differences (such as employment and business practices) and the imposition of exchange and capital controls.

Instability and uncertainties arising from the global geopolitical environment and the evolving international and domestic political, regulatory, and economic landscape, including the potential for changes in global trade policies, including sanctions and trade barriers, and trends such as populism, economic nationalism and negative sentiment toward multinational companies, as well as the cost of compliance with increasingly complex and often conflicting regulations worldwide, can impair our flexibility in modifying our product offerings, marketing, hiring or other strategies for growing our businesses, as well as our ability to improve productivity and maintain acceptable operating margins.

The United States and other countries may implement actions, including trade actions, tariffs, export controls, and sanctions, against other countries or localities, which along with any retaliatory measures could increase costs, adversely affect our operations, or adversely affect our ability to meet contractual and financial obligations. For example, in response to the conflict between Russia and Ukraine, the U.S. government and other governments have imposed a series of sanctions against certain Russian government, government-related, and other entities and individuals, together with enhanced export controls on certain products and financial and economic sanctions on certain industry sectors and parties in Russia. The governments of other jurisdictions in which we operate, such as the European Union and Canada, have also implemented additional sanctions or other restrictive measures. Additionally, it is possible that the Russia-Ukraine conflict or the evolving conflict in Israel and Gaza may escalate or expand, and the scope, extent and duration of the military action, current or future sanctions and resulting market and geopolitical disruptions could be significant. While to date sanctions and export controls have not had a material impact on our business, it is possible that these measures, as well as any countervailing responses from Russia, could adversely affect us and/or our supply chain, business partners or customers.

While these factors and their impact are difficult to predict, any one or more of them could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

Reductions in discretionary consumer spending could have an adverse effect on our business, financial condition, results of operations and prospects.

Our business is particularly sensitive to reductions from time to time in discretionary consumer spending. Demand for entertainment and leisure activities, including gaming, can be affected by changes in the economy and consumer tastes, both of which are difficult to predict and beyond our control. Unfavorable changes in general economic conditions, including recessions, economic slowdowns, sustained high levels of unemployment, and rising prices or the perception by consumers of weak or weakening economic conditions, may reduce our users' disposable income or result in fewer individuals engaging in entertainment and leisure activities, such as sports betting, online gaming or daily fantasy sports. As a result, we cannot ensure that the demand for our product offerings will remain consistent. Adverse developments affecting economies throughout the world, and particularly in the United States, including a general tightening of availability of credit, decreased liquidity in certain financial markets, inflation, increased interest rates, foreign exchange fluctuations, increased energy costs, acts of war or terrorism, transportation disruptions, natural disasters, declining consumer confidence, sustained high levels of unemployment or significant declines in stock markets, as well as concerns regarding pandemics, epidemics and the spread of contagious diseases, could lead to a reduction in discretionary spending on leisure activities, such as our Sportsbook, iGaming and DFS product offerings.

We may experience fluctuations in our operating results, which could make our future results difficult to predict and could cause our operating results to fall below expectations.

Our financial results have fluctuated in the past, and we expect our financial results to fluctuate from quarter to quarter in the future. These fluctuations may be due to a variety of factors, some of which are outside of our control and may not fully reflect the underlying performance of our business.

Our financial results in any given quarter may be influenced by numerous factors, many of which we are unable to predict or are outside of our control, including the impact of seasonality and our betting results, and the other risks and uncertainties set forth herein. In particular, our Sportsbook and DFS operations have significant exposure to, and may be materially impacted by, sporting events and seasons, which can result in short-term volatility in betting win margins and user engagement, thus impacting revenues. While we have been able to forecast revenues from our DFS business with greater precision than for newer product offerings, we cannot provide assurances that consumers will engage with our DFS product offering on a consistent basis. Consumer engagement with our Sportsbook, iGaming and DFS product offerings may decline or fluctuate as a result of a number of factors, including the popularity of the underlying sports, the user's level of satisfaction with our product offerings, our ability to improve and innovate, our ability to adapt our product offerings, outages and disruptions of online services, the availability of live sporting events, the services offered by our competitors, our marketing and advertising efforts or declines in consumer activity generally as a result of economic downturns, among others. Any decline or fluctuation in the recurring portion of our business may have a negative impact on our business, financial condition, results of operations or prospects.

In our iGaming product offering, operator losses are limited per stake to a maximum payout. When looking at bets across a period of time, however, these losses can potentially be significant. Our quarterly financial results may also fluctuate based on whether we pay any jackpots to our iGaming users during the relevant quarter. As part of our iGaming product offering, we offer progressive jackpot games. Each time a progressive jackpot game is played, a portion of the amount wagered by the user is contributed to the jackpot for that specific game or group of games. Once a jackpot is won, the progressive jackpot is reset with a predetermined base amount. While we maintain a reserve for these progressive jackpots, the cost of the progressive jackpot payout would be a cash outflow for our business in the period in which it is won with a potentially significant adverse effect on our financial condition and cash flows. Because winning a progressive jackpot is underpinned by a random mechanism, we cannot predict with certainty when any such jackpot will be won. In addition, we do not insure against random outcomes or jackpot wins.

Our projections are subject to significant risks, assumptions, estimates and uncertainties, including assumptions regarding future legislation and changes in regulations, both inside and outside of the United States. As a result, our projected revenues, market share, expenses and profitability may differ materially from our expectations.

We operate in rapidly changing and competitive industries and our projections are subject to the risks and assumptions made by management with respect to our industries. Operating results are difficult to forecast because they generally depend on our assessment of the timing of adoption of future legislation and regulations by different jurisdictions, which are uncertain. Furthermore, if we invest in the development of new products or distribution channels that do not achieve significant commercial success, whether because of competition or otherwise, we may not recover the often substantial "up front" costs of developing and marketing those products and distribution channels or recover the opportunity cost of diverting management and financial resources away from other product offerings or distribution channels.

Additionally, as described above, our business may be affected by reductions in consumer spending from time to time as a result of a number of factors that may be difficult to predict. This may result in decreased revenue levels, and we may be unable to adopt measures in a timely manner to compensate for any unexpected shortfall in revenue. This inability could cause our operating results in a given quarter to be higher or lower than expected. If actual results differ from our estimates, analysts may react negatively and our stock price could be materially impacted. You should not rely upon our historical financial results as indicators of our future financial performance, and our financial results and stock price may be volatile.

We have a history of losses and we may continue to incur losses in the future.

Since we were incorporated in 2011, we have experienced net losses and negative cash flows from operations. We experienced net losses in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") of \$802.1 million and \$1,378.0 million in the years ended December 31, 2023 and 2022, respectively. We may continue to experience losses in the future, and we cannot assure you that we will achieve profitability. We may continue to incur significant losses in future periods. We expect our operating expenses to increase in the future as we expand our operations. If our revenue does not grow at a greater rate than our expenses, we will not be able to achieve or maintain profitability. We may incur significant losses in the future for many reasons, including those described in the other risks and uncertainties described in this Annual Report. Additionally, we may encounter unforeseen expenses, operating delays, or other

unknown factors that may result in losses in future periods. If our expenses exceed our revenue, our business may be negatively impacted, and we may never achieve or maintain profitability.

Our results of operations may fluctuate due to seasonality and other factors and, therefore, our periodic operating results will not be guarantees of future performance.

Our Sportsbook and DFS operations fluctuate due to seasonal trends and other factors. A majority of our current Sportsbook and DFS handle and entry fees are and will continue to be generated from bets placed on, or contests relating to, the NFL and the NBA. As such, our historical revenues generally have been highest in the fourth quarter primarily due to the overlapping time frame of the NFL and NBA seasons. In addition, the NFL and NBA have their own respective off-seasons, which may cause decreases in our revenues during such periods. In addition, we believe that significant sporting events such as the playoffs and championship games tend to impact, among other things, revenues from operations, key metrics and customer activity, and, as such, our revenues may be impacted when those games occur. Our revenues have been, and in the future may be, affected by the scheduling of major sporting events that do not occur annually, such as the World Cup, or the cancellation or postponement of sporting events, such as the postponement of the 2020 Summer Olympic Games that took place in Summer 2021 due to the global COVID-19 pandemic. In addition, certain individuals or teams advancing or failing to advance and their scores and other results within specific tournaments, games or events may impact our financial performance.

The success, including win or hold rates, of existing or future sports betting and iGaming product offerings depends on a variety of factors and is not completely controlled by us.

The sports betting and iGaming industries are characterized by an element of chance. Accordingly, we employ theoretical win rates to estimate what a certain type of sports bet or iGame, on average, will win or lose in the long run. Net win is impacted by variations in the hold percentage (the ratio of net win to total amount wagered), or actual outcome, on our iGames and sports bets we offer to our users. We use hold percentage as an indicator of an iGame's or sports bet's performance against its expected outcome. Although each iGame or sports bet generally performs within a defined statistical range of outcomes, actual outcomes may vary for any given period. In addition to the element of chance, win rates (hold percentages) may also (depending on the game involved) be affected by the spread of limits and factors that are beyond our control, such as a user's experience and behavior, the mix of games played, the financial resources of users, the volume of bets placed and the amount of time spent engaging with our product offerings. As a result of the variability in these factors, the actual win rates on our iGames and sports bets may differ from the theoretical win rates we have estimated and could result in the winnings of our users exceeding those anticipated. The variability of win rates (hold rates) also has the potential to negatively impact our financial condition, results of operations, and cash flows.

Our success also depends in part on our ability to anticipate and satisfy user preferences in a timely manner. As we operate in a dynamic environment characterized by rapidly changing industry and legal standards, our product offerings will be subject to changing consumer preferences that cannot be predicted with certainty. We need to continually introduce new product offerings and identify future product offerings that complement our existing technology, respond to our users' needs and improve and enhance our existing technology to maintain or increase our user engagement and growth of our business. We may not be able to compete effectively unless our product offering selection keeps up with trends in the digital sports entertainment and gaming industries in which we compete, or trends in new gaming product offerings.

We use artificial intelligence, machine learning, data science and similar technologies in our business, and challenges with properly managing such technologies could result in reputational harm, competitive harm, and legal liability, and adversely affect our results of operations.

We use artificial intelligence, machine learning, data science and similar technologies (collectively, "AI") in our technology and infrastructure, which may become more important in our operations over time. Our competitors or other third parties may incorporate AI in a similar or different manner, and may do so more quickly or more successfully than us, which could impair our ability to compete effectively and adversely affect our results of operations. Additionally, if the content, analyses, materials or recommendations that AI produces or assists in producing are, or are alleged to be, infringing or otherwise violating of others' rights (including intellectual property rights), or illegal, we may be subject to legal liability or our business, financial condition, and results of operations may otherwise be adversely affected. In addition, the use of AI may result in violations of applicable data security or data privacy laws, or in cybersecurity incidents that implicate the personal data of end customers, employees or other third parties. Any such violation or cybersecurity incidents related to our use of AI could result in legal liability or otherwise adversely affect our reputation and results of operations. If our use of AI becomes controversial, we may experience brand or reputational harm or competitive harm. The rapid evolution of AI, including with respect to compliance with existing and potential government regulation of AI, may require significant resources, including to develop, test and maintain platforms, offerings, services, and features to help us implement AI in accordance with applicable law, and to minimize other adverse effect on our results of operations.

We rely on information technology and other systems and services, and any failures, errors, defects or disruptions in our systems or services could diminish our brand and reputation, subject us to liability, disrupt our business, affect our ability to scale our technical infrastructure and adversely affect our operating results and growth prospects. Our games and other software applications and systems, and the third-party platforms upon which they are made available, could contain undetected errors.

Our technology infrastructure is critical to the performance of our product offerings and to user satisfaction. We devote significant resources to network and data security to protect our systems and data. However, our systems may not be adequately designed with the necessary reliability and redundancy to avoid performance delays or outages that could be harmful to our business. We cannot assure you that the measures we take to prevent or hinder cybersecurity incidents; protect our systems, data and user information; prevent outages, data or information loss and fraud; and prevent or detect security breaches, including a disaster recovery strategy for server and equipment failure and back-office systems and the use of third parties for certain cybersecurity services, will provide absolute security. We have experienced, and we may in the future experience, website disruptions, outages and other performance problems due to a variety of factors, including infrastructure changes, human or software errors and capacity constraints. Such disruptions have not had a material impact on us; however, future disruptions from unauthorized access to, fraudulent manipulation of, or tampering with our computer systems and technological infrastructure, or those of third parties, could result in a wide range of negative outcomes, each of which could materially adversely affect our business, financial condition, results of operations and prospects.

Additionally, our product offerings from time to time contain errors, bugs, flaws or corrupted data, and these defects have in certain instances only become apparent after their launch. If a particular product offering is unavailable when users attempt to access it or navigation through our product offerings is slower than they expect, users may be unable to place their bets or submit their line-ups in a timely manner and may be less likely to return to our product offerings as often, if at all. Furthermore, programming errors, defects and data corruption could disrupt our operations, adversely affect the experience of our users, harm our reputation, cause our users to stop utilizing our product offerings, divert our resources and delay market acceptance of our product offerings, any of which could result in legal liability to us or harm our business, financial condition, results of operations and prospects.

If our user base and engagement continue to grow, and the amount and types of product offerings continue to grow and evolve, we will need an increasing amount of technical infrastructure, including network capacity and computing power, to continue to satisfy our users' needs. Such infrastructure expansion may be complex, and unanticipated delays in completing these projects or availability of components may lead to increased project costs, operational inefficiencies, or interruptions in the delivery or degradation of the quality of our product offerings. In addition, there may be issues related to this infrastructure that are not identified during the testing phases of design and implementation, which may only become evident after we have started to fully use the underlying equipment or software, that could further degrade the user experience or increase our costs. As such, we could fail to continue to effectively scale and grow our technical infrastructure to accommodate increased demands. In addition, our business may be subject to interruptions, delays or failures resulting from adverse weather conditions, other natural disasters, power loss, terrorism, cybersecurity incidents, public health emergencies or other catastrophic events.

We believe that if our users have a negative experience with our product offerings, or if our brand or reputation is negatively affected, users may be less inclined to continue or resume utilizing our product offerings or to recommend our product offerings to other potential users. As such, a failure or significant interruption in our service could harm our reputation, business and operating results.

Despite our security measures, our information technology and infrastructure are vulnerable to attacks by hackers or breaches due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen, which could damage our reputation, cause a loss of confidence in our product offerings or services, or otherwise adversely affect our business.

The secure maintenance and transmission of user information is a critical element of our operations. Our information technology and other systems that maintain and transmit user information, or those of service providers, business partners or employee information have in the past been, and in the future may be, compromised by a malicious third-party penetration of our network security, or that of a third-party service provider or business partner, or impacted by intentional or unintentional actions or inaction by our employees, or those of a third-party service provider or business partner. As a result, our users' information and funds may be lost, disclosed, accessed or taken without our users' consent. We have experienced cybersecurity incidents, attempts to breach our systems and other similar incidents in the past. For example, we have been and expect that we will continue to be subject to attempts to gain unauthorized access to or through our information systems or those we develop

for our customers, whether by our employees or third parties, including cyber-attacks by computer programmers and hackers who may develop and deploy viruses, worms or other malicious software programs. To date, these attacks have not had a material impact on our operations or financial results, but we cannot provide assurance that they will not have a material impact in the future.

We rely on encryption and authentication technology licensed from third parties in an effort to securely transmit confidential and sensitive information, including credit card numbers. Advances in computer capabilities, new technological discoveries or other developments may result in the whole or partial failure of this technology to protect transaction data or other confidential and sensitive information from being breached or compromised. In addition, websites are often attacked through compromised credentials, including those obtained through phishing and credential stuffing. Our security measures, and those of our third-party service providers, may not detect or prevent all attempts to breach our systems, denial-of-service attacks, viruses, malicious software, break-ins, phishing attacks, social engineering, security breaches or other attacks and similar disruptions that may jeopardize the security of information stored in or transmitted by our websites, networks and systems or that we or such third parties otherwise maintain, including payment card systems, which may subject us to fines or higher transaction fees or limit or terminate our access to certain payment methods. We and such third parties may not anticipate or prevent all types of attacks until after they have already been launched. For example, beginning in November 2022, DraftKings was the target of potential credential stuffing attacks, in which it appears that one or more bad actors may have obtained login credentials from a non-DraftKings source and used the credentials to access certain DraftKings players' accounts. Further, techniques used to obtain unauthorized access to or sabotage systems change frequently and may not be known until launched against us or our third-party service providers.

In addition, cybersecurity incidents can also occur as a result of non-technical issues, including intentional or inadvertent breaches by our employees or by third parties. These risks may increase over time as the complexity and number of technical systems and applications we use also increases. Breaches of our security measures or those of our third-party service providers or cybersecurity incidents have in the past been, and in the future could, result in unauthorized access to our sites, networks and systems; unauthorized access to and misappropriation of user information, including users' personally identifiable information, or other confidential or proprietary information of ourselves or third parties; viruses, worms, spyware or other malware being served from our sites, networks or systems; deletion or modification of content or the display of unauthorized content on our sites; interruption, disruption or malfunction of operations; costs relating to breach remediation, deployment of additional personnel and protection technologies, response to governmental investigations and media inquiries and coverage; engagement of third-party experts and consultants; litigation, regulatory action and other potential liabilities. In the past, we have experienced social engineering, phishing, malware and similar attacks and threats of denial-of-service attacks, none of which to date has been material to our business; however, such attacks could in the future have a material adverse effect on our operations. If any of these breaches of security should occur and be material, our reputation and brand could be damaged, our business may suffer, we could be required to expend significant capital and other resources to alleviate problems caused by such breaches, and we could be exposed to a risk of loss, litigation or regulatory action and possible liability. We cannot guarantee that recovery protocols and backup systems will be sufficient to prevent data loss. Actual or anticipated attacks may cause us to incur increasing costs, including costs to deploy additional personnel and protection technologies, train employees and engage third-party experts and consultants. While we maintain cybersecurity insurance coverage that we believe is adequate for our business, such coverage may not cover all potential costs and expenses associated with cybersecurity incidents that may occur in the future.

In addition, any party who is able to illicitly obtain a user's password could access the user's transaction data or personal information, resulting in the perception that our systems are insecure. Any compromise or breach of our security measures, or those of our third-party service providers, could violate applicable privacy, data protection, data security, network and information systems security and other laws and cause significant legal and financial exposure, adverse publicity and a loss of confidence in our security measures, which could have a material adverse effect on our business, financial condition, results of operations and prospects. We continue to devote significant resources to protect against cybersecurity incidents or we may need to in the future to address problems caused by breaches, including notifying affected users and responding to any resulting litigation, which in turn, diverts resources from the growth and expansion of our business.

We rely on Amazon Web Services to deliver our product offerings to users, and any disruption of or interference with our use of Amazon Web Services could adversely affect our business, financial condition, results of operations and prospects.

We host certain of our product offerings and support our operations using Amazon Web Services ("AWS"), a third-party provider of cloud infrastructure services, along with other service providers. We do not, and will not, have control over the operations of the facilities or infrastructure of the third-party service providers that we use. Such third parties' facilities are vulnerable to damage or interruption from natural disasters, cybersecurity incidents, terrorist attacks, power outages and similar

events or acts of misconduct. Our technology's continuing and uninterrupted performance is critical to our success. We have experienced, and we expect that in the future we will experience, interruptions, delays and outages in service and availability from these third-party service providers from time to time due to a variety of factors, including infrastructure changes, human or software errors, website hosting disruptions, cybersecurity incidents and capacity constraints. In addition, any changes in these third parties' service levels may adversely affect our ability to meet the requirements of our users. Since our technology's continuing and uninterrupted performance is critical to our success, sustained or repeated system failures would reduce the attractiveness of our product offerings. It may become increasingly difficult to maintain and improve our performance, especially during peak usage times, as we expand and the usage of our product offerings increases. Any negative publicity arising from these disruptions could harm our reputation and brand and may adversely affect the usage of our product offerings.

Our commercial agreement with AWS will remain in effect until terminated by AWS or us. AWS may only terminate the agreement for convenience after complying with the contractual prior notice requirement of two years. AWS may also terminate the agreement for cause upon a breach of the agreement or for failure to pay amounts due, in each case, subject to AWS providing prior written notice and a 30-day cure period. In the event that our agreement with AWS is terminated or we add additional cloud infrastructure service providers, we may experience significant costs or downtime in connection with the transfer to, or the addition of, new cloud infrastructure service providers. Although alternative providers could host our product offerings on a substantially similar basis to AWS, transitioning the cloud infrastructure currently hosted by AWS to alternative providers could potentially be disruptive and we could incur significant one-time costs.

Any of the above circumstances or events may harm our reputation and brand, reduce the availability or usage of our technology, lead to a significant loss of revenue, increase our costs and impair our ability to attract new users, any of which could adversely affect our business, financial condition and results of operations.

We rely on third-party providers to validate the identity and identify the location of our users, and if such providers fail to perform adequately or provide accurate information or we do not maintain business relationships with them, our business, financial condition and results of operations could be adversely affected.

There is no guarantee that the third-party geolocation and identity verification systems that we rely on will perform adequately, or be effective. We rely on our geolocation and identity verification systems to ensure we are in compliance with certain applicable laws and regulations, and any service disruption to those systems would prohibit us from operating our product offerings, and would adversely affect our business. Additionally, incorrect or misleading geolocation and identity verification data with respect to current or potential users received from third-party service providers may result in us inadvertently allowing access to our product offerings to individuals who should not be permitted to access them, or otherwise inadvertently deny access to individuals who should be able to access our product offerings, in each case based on inaccurate identity or geographic location determination. Our third-party geolocation services provider relies on its ability to obtain information necessary to determine geolocation from mobile devices, operating systems, and other sources. Changes, disruptions or temporary or permanent failure to access such sources by our third-party services providers may result in their inability to accurately determine the location of our users. Moreover, our inability to maintain our existing contracts with third-party services providers, or to replace them with equivalent third parties, may result in our inability to access geolocation and identity verification data necessary for our day-to-day operations. If any of these risks materializes, we may be subject to disciplinary action, fines or lawsuits, and our business, financial condition and results of operations could be adversely affected.

Our technology contains third-party open source software components, and failure to comply with the terms of the underlying open source software licenses could restrict our ability to provide our product offerings.

Our technology contains software modules licensed to us by third-party authors under "open source" licenses. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide support, warranties, indemnification or other contractual protections regarding infringement claims or the quality of the source code. In addition, the public availability of such software may make it easier for others to compromise our technology.

Some open source licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use, or grant other licenses to our intellectual property. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. This would allow our competitors to create similar product offerings with lower development effort and time and ultimately could result in a loss of our competitive advantages. Alternatively, to avoid the public release of the affected portions of our source code, we could be required to expend substantial time and resources to re-engineer some or all of our software.

Although we monitor our use of open source software to avoid subjecting our technology to conditions we do not intend, there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to provide or distribute our technology. From time to time, there have been claims challenging the ownership of open source software against companies that incorporate open source software into their solutions. As a result, we could be subject to lawsuits by parties claiming ownership of what we believe to be open source software. Moreover, we cannot assure you that our processes for controlling our use of open source software in our technology will be effective. If we are held to have breached or failed to fully comply with all the terms and conditions of an open source software license, we could face infringement or other liability, or be required to seek costly licenses from third parties to continue providing our product offerings on terms that are not economically feasible, to re-engineer our technology, to discontinue or delay the provision of our product offerings if re-engineering could not be accomplished on a timely basis or to make generally available, in source code form, our proprietary code, any of which could adversely affect our business, financial condition and results of operations.

We rely on third-party payment processors to process deposits and withdrawals made by our users, and if we cannot manage our relationships with such third parties and other payment-related risks, our business, financial condition and results of operations could be adversely affected.

We rely on a limited number of third-party payment processors to process deposits and withdrawals made by our users. If any of our third-party payment processors terminates its relationship with us or refuses to renew its agreement with us on commercially reasonable terms, we would need to find an alternate payment processor, and may not be able to secure similar terms or replace such payment processor in an acceptable time frame. Further, the software and services provided by our third-party payment processors may not meet our expectations, contain errors or vulnerabilities, be compromised or experience outages. Any of these risks could cause us to lose our ability to accept online payments or other payment transactions, make timely payments to our users or access funds or credit in such payment processors or systems, any of which could make our technology less trustworthy and convenient, adversely affect our ability to attract and retain our users and negatively impact our working capital position.

Nearly all of our payments are made by credit card, debit card or through other third-party payment services, which subjects us to certain regulations and the risk of fraud. We may in the future offer new payment options to users that may be subject to additional regulations and risks. We are also subject to a number of other laws and regulations relating to the payments we accept from our users, including with respect to money laundering, money transfers, privacy and information security. If we fail to comply with applicable rules and regulations, we may be subject to civil or criminal penalties, fines and/or higher transaction fees and may lose our ability to accept online payments or other payment card transactions, which could make our product offerings less convenient and attractive to our users. If any of these events were to occur, our business, financial condition and results of operations could be adversely affected.

For example, if we are deemed to be a money transmitter as defined by applicable regulations, we could be subject to certain laws, rules and regulations enforced by multiple authorities and governing bodies in the United States and numerous state and local agencies who may define money transmitter differently. For example, certain states may have a more expansive view of who qualifies as a money transmitter. Additionally, outside of the United States, we could be subject to additional laws, rules and regulations related to the provision of payments and financial services, and if we expand into new jurisdictions, the foreign regulations and regulators governing our business that we are subject to will expand as well. If we are found to be a money transmitter under any applicable regulation and we are not in compliance with such regulations, we may be subject to fines or other penalties in one or more jurisdictions levied by federal or state or local regulators, including state Attorneys General, as well as those levied by foreign regulators. In addition to fines, penalties for failing to comply with applicable rules and regulations could include criminal and civil proceedings, forfeiture of significant assets or other enforcement actions. We could also be required to make changes to our business practices or compliance programs as a result of regulatory scrutiny.

Additionally, our payment processors require us to comply with payment card network operating rules, which are set and interpreted by the payment card networks. The payment card networks could adopt new operating rules or interpret or reinterpret existing rules in ways that might prohibit us from providing certain product offerings to some users, be costly to implement or difficult to follow. We have agreed to reimburse our payment processors for fines they are assessed by payment card networks if we or our users violate these rules. Any of the foregoing risks could adversely affect our business, financial condition and results of operations.

We rely on third-party sports data providers for real-time and accurate data for sporting events, and if such third parties do not perform adequately or terminate their relationships with us, our costs may increase and our business, financial condition and results of operations could be adversely affected.

We rely on third-party sports data providers such as SportRadar and BetGenius to obtain accurate information regarding schedules, results, performance and outcomes of sporting events. We rely on this data to determine when and how bets are settled and how contestants rank in their DFS contests. We have experienced, and may continue to experience, errors in these data feeds, which may result in us incorrectly settling bets or ranking contestants in their DFS contests. If we cannot adequately resolve the issue with our users, our users may have a negative experience with our product offerings, our brand or reputation may be negatively affected and our users may be less inclined to continue or resume utilizing our product offerings or recommend our product offerings to other potential users. As such, a failure or significant interruption in our data feed service may harm our reputation, business and operating results.

Furthermore, if any of our sports data partners terminates its relationship with us or refuses to renew its agreement with us on commercially reasonable terms, we would need to find an alternate provider, and may not be able to secure similar terms or replace such providers in an acceptable time frame, or at all. Any of these risks could increase our costs and adversely affect our business, financial condition and results of operations. Further, any negative publicity related to any of our third-party partners, including any publicity related to regulatory concerns, could adversely affect our reputation and brand, and could potentially lead to increased regulatory or litigation exposure.

We rely on other third-party service providers and if such third parties do not perform adequately or terminate their relationships with us, our costs may increase and our business, financial condition and results of operations could be adversely affected.

Our success depends in part on our relationships with other third-party service providers. For example, we rely on third parties for content delivery, load balancing and protection against distributed denial-of-service attacks. If those providers do not perform adequately, our users may experience issues or interruptions with their product offering experiences. Furthermore, if any of our partners terminates its relationship with us or refuses to renew its agreement with us on commercially reasonable terms, we would need to find an alternate provider, and may not be able to secure similar terms or replace such providers in an acceptable time frame, or at all. We also rely on other software and services supplied by third parties, such as communications and internal software, and our business may be adversely affected to the extent such software and services do not meet our expectations, contain errors or vulnerabilities, are compromised or experience outages. Any of these risks could increase our costs and adversely affect our business, financial condition and results of operations. Further, any negative publicity related to any of our third-party partners, including any publicity related to regulatory concerns, could adversely affect our reputation and brand, and could potentially lead to increased regulatory or litigation exposure.

We incorporate technology from third parties into our product offerings. We cannot be certain that our licensors are not infringing the intellectual property rights of others or that the suppliers and licensors have sufficient rights to the technology in all jurisdictions in which we may operate. Some of our license agreements may be terminated by our licensors for convenience. If we are unable to obtain or maintain rights to any of this technology because of intellectual property infringement claims brought by third parties against our suppliers and licensors or against us, or if we are unable to continue to obtain the technology or enter into new agreements on commercially reasonable terms, our ability to develop our product offerings containing that technology could be severely limited and our business could be harmed.

Additionally, if we are unable to obtain necessary technology from third parties, we may be forced to acquire or develop alternate technology, which may require significant time and effort and may be of lower quality or performance standards. This would limit and delay our ability to provide new or competitive product offerings and increase our costs. If alternate technology cannot be obtained or developed, we may not be able to offer certain functionality as part of our product offerings, which could adversely affect our business, financial condition and results of operations.

If we fail to detect fraud or theft, including by our users and employees, our reputation may suffer which could harm our brand and reputation and negatively impact our business, financial condition and results of operations and can subject us to investigations and litigation.

We have in the past incurred, and may in the future incur, losses from various types of financial fraud, including use of stolen or fraudulent credit card data, claims of unauthorized payments by a user and attempted payments by users with insufficient funds. Bad actors use increasingly sophisticated methods to engage in illegal activities involving personal information, such as unauthorized use of another person's identity, account information or payment information and unauthorized acquisition or use of credit or debit card details, bank account information and mobile phone numbers and

accounts. Under current credit card practices, we may be liable for use of funds on our products with fraudulent credit card data, even if the associated financial institution approved the credit card transaction.

Acts of fraud may involve various tactics, including collusion. Successful exploitation of our systems could have negative effects on our product offerings, services and user experience and could harm our reputation. Failure to discover such acts or schemes in a timely manner could result in harm to our operations. In addition, negative publicity related to such schemes could have an adverse effect on our reputation, potentially causing a material adverse effect on our business, financial condition, results of operations and prospects. In the event of the occurrence of any such issues with our existing technology or product offerings, substantial engineering and marketing resources and management attention may be diverted from other projects to correct these issues, which may delay other projects and the achievement of our strategic objectives.

In addition, any misappropriation of, or access to, users' or other proprietary information or other breach of our information security could result in legal claims or legal proceedings, including regulatory investigations and actions, or liability for failure to comply with privacy and information security laws, including for failure to protect personal information or for misusing personal information, which could disrupt our operations, force us to modify our business practices, damage our reputation and expose us to claims from our users, regulators, employees and other persons, any of which could have an adverse effect on our business, financial condition, results of operations and prospects. For example, beginning in November 2022, DraftKings was the target of potential credential stuffing attacks, in which it appears that one or more bad actors may have obtained login credentials from a non-DraftKings source and used the credentials to access certain DraftKings players' accounts.

Despite measures we have taken to detect and reduce the occurrence of fraudulent or other malicious activity on our platform, we cannot guarantee that any of our measures will be effective or will scale efficiently with our business. Our failure to adequately detect or prevent fraudulent transactions could harm our reputation or brand, result in litigation or regulatory action and lead to expenses that could adversely affect our business, financial condition and results of operations.

If Internet and other technology-based service providers experience service interruptions, our ability to conduct our business may be impaired and our business, financial condition and results of operations could be adversely affected.

A substantial portion of our network infrastructure is provided by third parties, including Internet service providers and other technology-based service providers. See “—We rely on Amazon Web Services to deliver our product offerings to users and any disruption of or interference with our use of Amazon Web Services could adversely affect our business, financial condition, results of operations and prospects.” We require technology-based service providers to implement cyber-attack-resilient systems and processes. However, if Internet service providers experience service interruptions, including because of cybersecurity incidents, or due to an event causing an unusually high volume of Internet use, communications over the Internet may be interrupted and impair our ability to conduct our business. Internet service providers and other technology-based service providers may in the future roll out upgraded or new mobile or other telecommunications services, such as 5G or 6G services, which may not be successful and thus may impact the ability of our users to access our product offerings in a timely fashion or at all. In addition, our ability to process e-commerce transactions depends on bank processing and credit card systems. To prepare for system problems, we continuously seek to strengthen and enhance our current facilities and the capabilities of our system infrastructure and support. Nevertheless, there can be no assurance that the Internet infrastructure or our own network systems will continue to be able to meet the demand placed on us by the continued growth of the Internet, the overall online gaming industry and our users. Any difficulties these providers face, including the potential of certain network traffic receiving priority over other traffic (i.e., lack of net neutrality), may adversely affect our business, and we exercise little control over these providers, which increases our vulnerability to problems with the services they provide. Any system failure as a result of reliance on third parties, such as network, software or hardware failure, including as a result of cybersecurity incidents, which causes a loss of our users' property or personal information or a delay or interruption in our online services and product offerings and e-commerce services, including our ability to handle existing or increased traffic, could result in a loss of anticipated revenue, interruptions to our product offerings, cause us to incur significant legal, remediation and notification costs, degrade the customer experience and cause users to lose confidence in our product offerings, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We rely on strategic relationships with casinos, tribes and horse-tracks in order to be able to offer our Sportsbook and iGaming product offerings in certain jurisdictions. If we cannot establish and manage such relationships with such partners, our business, financial condition and results of operations could be adversely affected.

Under the sports betting and iGaming laws of certain states, online Sportsbook and iGaming are limited to a finite number of retail operators, such as casinos, tribes or tracks, who own a “skin” or “skins” under that state's law. A “skin” is a legally-authorized license from a state to offer online Sportsbook or iGaming services provided by such a retail operator. The “skin”

provides a market access opportunity for mobile operators to operate in the jurisdiction pending licensure and other required approvals by the state's regulator. The entities that control those "skins," and the numbers of "skins" available, are typically determined by a state's law authorizing sports betting or iGaming. In most of the jurisdictions in which we offer Sportsbook and iGaming, we currently rely on a casino, tribe or track in order to get a "skin." These "skins" are what allow us to gain access to jurisdictions where online operators are required to have a retail relationship. If we cannot establish, renew or manage such relationships, those relationships could terminate and we would not be allowed to operate in those jurisdictions until we enter into new ones. As a result, our business, financial condition and results of operations could be adversely affected.

Our growth depends, in part, on the success of our strategic relationships with third parties. Overreliance on certain third parties, or our inability to extend existing relationships or agree to new relationships, may cause unanticipated costs for us and impact our financial performance in the future.

We rely on relationships with sports leagues and teams, professional athletes and athlete organizations, advertisers, casinos and other third parties in order to attract users to our product offerings. These relationships along with providers of online services, search engines, social media, directories and other websites and e-commerce businesses direct consumers to our product offerings. In addition, many of the parties with whom we have advertising arrangements provide advertising services to other companies, including other fantasy sports and gaming product offerings with whom we compete. While we believe there are other third parties that could drive users to our product offerings, adding or transitioning to them may disrupt our business and increase our costs. In the event that any of our existing relationships or our future relationships fails to provide services to us in accordance with the terms of our arrangement, or at all, and we are not able to find suitable alternatives, this could impact our ability to attract consumers cost effectively and harm our business, financial condition, results of operations and prospects.

Our growth prospects may suffer if we are unable to develop successful product offerings or if we fail to pursue additional product offerings. In addition, if we fail to make the right investment decisions in our product offerings and technology, we may not attract and retain key users and our revenue and results of operations may decline.

We were founded in 2011 with a singular focus on the DFS industry and initially focused our efforts on growing our DFS product offering. In 2018, we expanded our product offerings to include our Sportsbook and iGaming product offerings. In 2021, we expanded our media offering and launched DraftKings Marketplace. We have rapidly expanded and we anticipate expanding further as new product offerings mature and as we pursue our growth strategies.

The industries in which we operate are subject to rapid and frequent changes in standards, technologies, products and services, as well as in customer demands and expectations and regulations. We must continuously make decisions regarding in which product offerings and technology we should invest to meet customer demand in compliance with evolving industry standards and regulatory requirements and must continually introduce and successfully market new and innovative technologies, product offerings and enhancements to remain competitive and effectively stimulate customer demand, acceptance and engagement. Our ability to engage, retain, and increase our user base and to increase our revenue will depend heavily on our ability to successfully create new product offerings, both independently and together with third parties. We may introduce significant changes to our existing technology and product offerings or develop and introduce new and unproven products and services, with which we have little or no prior development or operating experience. The process of developing new product offerings and systems is inherently complex and uncertain, and new product offerings may not be well received by users, even if well-reviewed and of high quality. If we are unable to develop technology and product offerings that address users' needs or enhance and improve our existing technology and product offerings in a timely manner, that could have a material adverse effect on our business, financial condition, results of operations and prospects.

Although we intend to continue investing in our research and development efforts, if new or enhanced product offerings fail to engage our users or partners, we may fail to attract or retain users or to generate sufficient revenue, operating margin, or other value to justify our investments, any of which may seriously harm our business. In addition, management may not properly ascertain or assess the risks of new initiatives, and subsequent events may alter the risks that were evaluated at the time we decided to execute any new initiative. Developing and creating additional product offerings can also divert management's attention from other business issues and opportunities. Even if our new product offerings attain market acceptance, those new product offerings have in certain cases cannibalized, and in the future could continue to cannibalize, the market share of our existing product offerings or share of our users' wallets in a manner that may negatively impact our business. For example, we have historically observed that revenue from our DFS product offering tends to decline in a state following the launch of our Sportsbook product offering in that state. Furthermore, such expansion of our business increases the complexity of our business and places an additional burden on our management, operations, technical systems and financial resources and we may not recover the often-substantial up-front costs of developing and marketing new product offerings, or recover the opportunity cost of diverting management and financial resources away from other product offerings. In the event of continued growth of our

operations, product offerings or in the number of third-party relationships, we may not have adequate resources, operationally, technologically or otherwise to support such growth and the quality of our technology, product offerings or our relationships with third parties could suffer. In addition, failure to effectively identify, pursue and execute new business initiatives, or to efficiently adapt our processes and infrastructure to meet the needs of our innovations, may adversely affect our business, financial condition, results of operations and prospects.

Any new product offerings may also require our users to utilize new skills to use our product offerings. This could create a lag in adoption of new product offerings and new user additions related to any new product offerings. To date, new product offerings and enhancements of our existing technology have not materially hindered our user growth or engagement, but that may be the result of a large portion of our user base being in a younger demographic and more willing to invest the time to learn to use our product offerings most effectively. To the extent that future users, including those in older demographics, are less willing to invest the time to learn to use our product offerings, and if we are unable to make our product offerings easy to learn to use, our user growth or engagement could be affected, and our business could be harmed. We may develop new product offerings that increase user engagement and costs without increasing revenue.

Additionally, we may make bad or unprofitable decisions regarding these investments. If new or existing competitors offer more attractive product offerings, we may lose users or users may decrease their spending on our product offerings. New customer demands, superior competitive product offerings, new industry standards or changes in the regulatory environment could render our existing product offerings unattractive, unmarketable or obsolete and require us to make substantial unanticipated changes to our technology or business model. Our failure to adapt to a rapidly changing market or evolving customer demands could harm our business, financial condition, results of operations and prospects.

Our growth will depend on our ability to attract and retain users, and the loss of our users, failure to attract new users in a cost-effective manner, or failure to effectively manage our growth could adversely affect our business, financial condition, results of operations and prospects.

Our ability to achieve growth in revenue in the future will depend, in large part, upon our ability to attract new users to our product offerings, retain existing users of our product offerings and reactivate users in a cost-effective manner. Achieving growth in our community of users may require us to increasingly engage in sophisticated and costly sales and marketing efforts, which may not have a favorable return on investment. We have used and expect to continue to use a variety of free and paid marketing channels, in combination with compelling offers and exciting games to achieve our objectives. For paid marketing, we leverage a broad array of advertising channels, including television, radio, social media platforms, such as Facebook, Instagram, Twitter and Snap, affiliates and paid and organic search, and other digital channels, such as mobile display. If the search engines on which we rely modify their algorithms, change their terms around gaming, or if the prices at which we may purchase listings increase, then our costs could increase, and fewer users may click through to our website. If links to our website are not displayed prominently in online search results, if fewer users click through to our website, if our other digital marketing campaigns are not effective, or if the costs of attracting users with any of our current methods significantly increase, then our ability to efficiently attract new users could be reduced, our revenue could decline and our business, financial condition and results of operations could be harmed.

In addition, our ability to increase the number of users of our product offerings will depend on continued user adoption of Sportsbook, iGaming and DFS. Growth in the gaming industry and the level of demand for and market acceptance of our product offerings will be subject to a high degree of uncertainty. We cannot assure you that consumer adoption of our product offerings will continue or exceed current growth rates, or that the industry will achieve more widespread acceptance.

Additionally, as technological or regulatory standards change and we modify our product offerings to comply with those standards, we may need users to take certain actions to continue playing, such as performing age verification checks or accepting new terms and conditions. Users may stop using our product offerings at any time, including if the quality of the user experience, including our support capabilities in the event of a problem, does not meet their expectations or keep pace with the quality of the customer experience generally offered by competitive product offerings.

Our core values of focusing on our users first and acting for the long term may conflict with the short-term interests of our business.

One of our operating principles is to put our users first, which we believe is essential to our success and serves the best, long-term interests of the Company and our stakeholders. Therefore, we have made in the past, and we may make in the future,

certain investments or changes in strategy that we think will benefit our users, even if our decision negatively impacts our operating results in the short term.

Our business model depends upon the continued compatibility between our apps and the major mobile operating systems and upon third-party platforms for the distribution of our product offerings. If Google Play or the Apple App Store prevents users from downloading our apps or augments the restrictions on advertising to our users, our ability to grow our revenue, profitability and prospects may be adversely affected.

The substantial majority of our users access our Sportsbook, iGaming and DFS product offerings primarily on mobile devices, and we believe that this will continue to be increasingly important to our long-term success. Our business model depends upon the continued compatibility between our apps and the major mobile operating systems. Third parties with whom we do not have any formal relationships control the design of mobile devices and operating systems. These parties frequently introduce new devices, and from time to time they may introduce new operating systems or modify existing ones. Network carriers may also impact the ability to download apps or access specified content on mobile devices.

In addition, we rely upon third-party platforms for distribution of our product offerings. Our DFS product offering is delivered as a free application through both the Apple App Store and the Google Play Store and is also accessible via mobile and traditional websites. Our Sportsbook and iGaming product offerings are primarily distributed through the Apple App Store and a traditional website. The Google Play Store and Apple App Store are global application distribution platforms and the main distribution channels for our apps. As such, the promotion, distribution and operation of our apps are subject to the respective distribution platforms' standard terms and policies for application developers, which are broad and subject to frequent changes and interpretation. Furthermore, the distribution platforms may not enforce their standard terms and policies for application developers consistently and uniformly across all applications and with all publishers.

There is no guarantee that popular mobile devices will start or continue to support or feature our product offerings, or that mobile device users will continue to use our product offerings rather than competing product offerings. We are dependent on the interoperability of our technology with popular mobile operating systems, technologies, networks and standards that we do not control, such as the Android and iOS operating systems, and any changes, bugs, technical or regulatory issues in such systems, our relationships with mobile manufacturers and carriers, or in their terms of service or policies that degrade our product offerings' functionality, reduce or eliminate our ability to distribute our product offerings, give preferential treatment to competitive product offerings, limit our ability to deliver high quality product offerings, or impose fees or other charges related to delivering our product offerings, could adversely affect our product offering usage and monetization on mobile devices.

Moreover, our Sportsbook and DFS product offerings require high-bandwidth data capabilities in order to place time-sensitive bets. If the growth of high-bandwidth capabilities, particularly for mobile devices, is slower than we expect, our user growth, retention, and engagement may be seriously harmed. Additionally, to deliver high-quality content over mobile cellular networks, our product offerings must work well with a range of mobile technologies, systems, networks, regulations, and standards that we do not control. In particular, any future changes to the iOS or Android operating systems may impact the accessibility, speed, functionality, and other performance aspects of our product offerings, which issues are likely to occur in the future from time to time. In addition, the adoption of any laws or regulations that adversely affect the growth, popularity, or use of the Internet, including laws governing Internet neutrality, could decrease the demand for our product offerings and increase our cost of doing business. Specifically, any laws that would allow mobile providers in the United States to impede access to content, or otherwise discriminate against content providers like us, such as providing for faster or better access to our competitors, over their data networks, could have a material adverse effect on our business, financial condition, results of operations and prospects.

Furthermore, we may not successfully cultivate relationships with key industry participants or develop product offerings that operate effectively with these technologies, systems, networks, regulations, or standards. If it becomes more difficult for our users to access and use our product offerings on their mobile devices, if our users choose not to access or use our product offerings on their mobile devices, or if our users choose to use mobile product offerings that do not offer access to our product offerings, our user growth, retention, and engagement could be seriously harmed.

In addition, if any of the third-party platforms used for distribution of our product offerings were to limit or disable advertising on their platforms, either because of technological constraints or because the owners of these distribution platforms wished to impair our ability to serve ads on them, our ability to generate revenue could be harmed. Also, technologies have been, and may continue to be, developed by companies, such as Apple and Google, that, among other things, block or limit the display of our advertisements and some or all third-party cookies on mobile and desktop devices, limit cross-site and cross-device attribution, prevent measurement outside a narrowly-defined attribution window and prevent advertisement re-targeting

and optimization. These developments could require us to make changes to how we collect information on, and track the actions of, our users and impact our marketing activities. While these changes have not had a material adverse impact on our business to date, they could materially impact the way we do business in the future, and if we or our advertising partners are unable to quickly and effectively adjust to new changes, there could be an adverse effect on our business, financial condition, results of operations or prospects.

We may require additional capital to support our growth plans, and such capital may not be available on terms acceptable to us, if at all. This could hamper our growth and adversely affect our business.

We intend to make significant investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new product offerings and features or enhance our existing product offerings and features, improve our operating infrastructure or acquire complementary businesses, personnel and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds, which may involve increased funding costs due to rising interest rates. Our ability to obtain additional capital, if and when required, will depend on our business plans, investor demand, our operating performance, capital markets conditions and other factors. If we raise additional funds by issuing equity, equity-linked or debt securities, those securities may have rights, preferences or privileges senior to the rights of our currently issued and outstanding equity or debt, and our existing stockholders may experience dilution. If we are unable to obtain additional capital when required, or on satisfactory terms, our ability to continue to support our business growth or to respond to business opportunities, challenges or unforeseen circumstances could be adversely affected, and our business may be harmed.

We may invest in or acquire other businesses, and our business may suffer if we are unable to successfully integrate acquired businesses into our Company or otherwise manage the growth associated with multiple acquisitions.

As part of our business strategy, we have made, and may continue to make, acquisitions as opportunities arise to add new or complementary businesses, products, brands or technologies. In some cases, the costs of such acquisitions may be substantial, including as a result of professional fees, financing costs and due diligence efforts. There is no assurance that the time and resources expended on pursuing a particular acquisition will result in a completed transaction, or that any completed transaction will ultimately be successful. In addition, the assumptions we use to evaluate acquisition opportunities may not prove to be accurate, and intended benefits may not be realized. Our due diligence investigations may fail to identify all of the issues, liabilities or other challenges associated with an acquired business, which could result in increased risk of unanticipated or unknown issues or liabilities, including with respect to privacy, competition and other regulatory matters, and our mitigation strategies for such risks that are identified may not be effective. Further, we may be unable to identify suitable acquisition or strategic investment opportunities, or may be unable to obtain any required financing or regulatory approvals, and therefore may be unable to complete such acquisitions or strategic investments on favorable terms, if at all. We may decide to pursue acquisitions with which our investors may not agree, and we cannot assure investors that any acquisition or investment will be successful or otherwise provide a favorable return on investment. In addition, acquisitions and the integration thereof, such as the GNOG Transaction, require significant time and resources and place significant demands on our management, as well as on our operational and financial infrastructure. In addition, if we fail to successfully complete transactions or integrate new teams, or integrate the products and technologies associated with these acquisitions into our Company, our business could be materially harmed. Acquisitions have, and may continue to, expose us to operational challenges and risks, including:

- the ability to profitably manage acquired businesses or successfully integrate the acquired businesses' operations, personnel, financial reporting, accounting and internal controls, technologies and products into our business;
- increased indebtedness and the expense of integrating acquired businesses, including significant administrative, operational, economic, geographic or cultural challenges in managing and integrating the expanded or combined operations;
- entry into jurisdictions or acquisition of products or technologies with which we have limited or no prior experience, and the potential of increased competition with new or existing competitors as a result of such acquisitions;
- management challenges involved in maintaining geographically dispersed operations with different business cultures and compensation structures;
- diversion of management's attention and the over-extension of our operating infrastructure and our management systems, information technology systems, and internal controls and procedures, which may be inadequate to support growth;

- the ability to fund our capital needs and any cash flow shortages that may occur if anticipated revenue is not realized or is delayed, whether by general economic or market conditions, or unforeseen internal difficulties; and
- the ability to retain or hire qualified personnel required for expanded operations.

Our acquisition strategy may not succeed if we are unable to remain attractive to target companies or expeditiously complete transactions. Issuing shares of our Class A common stock to fund an acquisition would cause economic dilution to our existing stockholders. If we develop a reputation for being a difficult acquirer or having an unfavorable work environment, or target companies view our Class A common stock unfavorably, we may be unable to consummate key acquisition transactions essential to our corporate strategy and our business may be seriously harmed.

Acquisitions may also disrupt our ongoing business, divert our resources and require significant management attention that would otherwise be available for ongoing development of our current business. In addition, we may be required to make additional capital investments or undertake remediation efforts to ensure the success of our acquisitions, which may reduce the benefits of such acquisitions. We also may be required to use a substantial amount of our cash or issue debt or equity securities to complete an acquisition, which could deplete our cash reserves and/or dilute our existing stockholders.

In addition, there has been, and we expect there will continue to be, significant competition within the gaming industry for acquisitions of businesses, technologies and assets. As such, even if we are able to identify an acquisition that we would like to pursue, the target may be acquired by another strategic buyer or we may otherwise not be able to complete the acquisition on commercially reasonable terms, or at all. Moreover, in addition to our failure to realize the anticipated benefits of any acquisition, including our revenues or return on investment assumptions, we may be exposed to unknown liabilities or impairment charges as a result of acquisitions we do complete.

We are party to pending litigation in various jurisdictions and with various plaintiffs, and we may be subject to future litigation in the operation of our business. An adverse outcome in one or more proceedings could adversely affect our business.

In the past we have been party to, and we may in the future increasingly face the risk of, claims, lawsuits, and other proceedings involving competition and antitrust, intellectual property, privacy, consumer protection, accessibility claims, securities, tax, labor and employment, commercial disputes, services and other matters. See “Business — Legal Proceedings.” Litigation to defend us against claims by third parties, or to enforce any rights that we may have against third parties, may be necessary, which could result in substantial costs and diversion of our resources, causing a material adverse effect on our business, financial condition, results of operations and prospects.

Any litigation to which we are a party may result in an onerous or unfavorable judgment that may not be reversed upon appeal, or in payments of substantial monetary damages or fines, the posting of bonds requiring significant collateral, letters of credit or similar instruments, or we may decide to settle lawsuits on similarly unfavorable terms. These proceedings could also result in reputational harm, criminal sanctions, consent decrees or orders preventing us from offering certain product offerings or requiring a change in our business practices in costly ways or requiring development of non-infringing or otherwise altered products or technologies. Litigation and other claims and regulatory proceedings against us could result in unexpected disciplinary actions, expenses and liabilities, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

DraftKings Marketplace facilitates the purchase and sale of nonfungible tokens (NFTs). The Company is defending litigation claiming Marketplace NFTs are “securities” under federal and state securities laws. While the Company believes that Marketplace NFTs are not securities, the final determination by the court in which the litigation is pending, another court, or by the SEC or another state or foreign regulatory authority is subject to uncertainty and if determined or re-interpreted in the future to be a security, we may be subject to damages in litigation, regulatory scrutiny, investigations, fines, and other penalties.

In developing, launching and operating DraftKings Marketplace, the Company analyzed whether the NFTs created for, offered, sold, or traded on, DraftKings Marketplace would be deemed “securities” under applicable law. The Company believes that such NFTs are not securities under the U.S. federal securities laws based, among other things, on the statutory definition of a security under the U.S. federal securities laws, Supreme Court decisions applying the definition of security, other judicial decisions applying the definition of a security, and factors articulated in public communications by representatives of the SEC, no-action letters, and enforcement actions.

The Company is defending litigation filed in March 2023 in federal district court in Massachusetts alleging, among other things, that Marketplace NFTs are securities that were required to be, but were not, registered with the SEC in accordance with federal and Massachusetts law, and that Marketplace is a securities exchange that is not registered as required by federal and Massachusetts law. In addition, in July 2023, the Company received a subpoena from the Securities Division of the Office of the Secretary of the Commonwealth of Massachusetts seeking documents and requesting answers to interrogatories concerning, among other things, DraftKings Marketplace and Marketplace NFTs, and related matters. Our belief that Marketplace NFTs are not securities is a risk-based assessment and not a legal standard nor is it binding on any regulatory authority or court and, notwithstanding our conclusions, we could be subject to legal or regulatory action in the event a court, the SEC or a state or foreign regulatory authority were to determine that a particular NFT offered, sold, or traded on DraftKings Marketplace is a “security” under applicable law.

The legal test for determining whether a particular digital asset, such as Marketplace NFTs, is a security is a complex and fact-driven analysis and the SEC generally does not provide advance guidance or confirmation on the status of any particular digital asset as a security.

The classification of a digital asset as a security may have wide-ranging implications. For example, a security may generally only be offered or sold in the United States pursuant to a registration statement filed with the SEC or in a transaction that is exempt from registration; persons that effect transactions in assets that are securities in the United States may be subject to registration with the SEC as a “broker” or “dealer;” platforms that bring together purchasers and sellers to trade digital assets that are securities in the United States are generally subject to registration as securities exchanges, or must qualify for an exemption; persons facilitating clearing and settlement of securities may be subject to registration with the SEC as a clearing agency; and foreign jurisdictions may have similar licensing, registration, and qualification requirements.

If the court in which the litigation is pending, another court, the SEC or another state or foreign regulatory authority makes a final determination that Marketplace NFTs are securities under applicable law, we could be subject to, among other things, damages in litigation, regulatory scrutiny, investigations, sanctions, civil monetary penalties, injunctions, fines, reputational harm and other penalties, which could negatively impact our business, operating results, and financial condition.

Our business is subject to a variety of U.S. and foreign laws, many of which are unsettled and still developing and which could subject us to claims or otherwise harm our business. Any change in existing regulations or their interpretation, or the regulatory climate applicable to our product offerings and services, or changes in tax rules and regulations or interpretation thereof related to our product offerings and services, could adversely impact our ability to operate our business as currently conducted or as we seek to operate in the future, which could have a material adverse effect on our financial condition and results of operations.

We are generally subject to laws and regulations relating to fantasy sports, sports betting and iGaming in the jurisdictions in which we conduct our business or in some circumstances, in those jurisdictions in which we offer our services or those are available, as well as the general laws and regulations that apply to all e-commerce businesses, such as those related to privacy and personal information, tax and consumer protection. These laws and regulations vary from one jurisdiction to another and future legislative and regulatory action, court decisions or other governmental action, which may be affected by, among other things, political pressures, attitudes and climates, as well as personal biases, may have a material impact on our operations and financial results. In particular, some jurisdictions have introduced legislation or regulations attempting to restrict or prohibit online sport betting and online gaming, while others have taken the position that online sports betting and online gaming should be licensed and regulated and have adopted or are in the process of considering enabling legislation and regulations. Additionally, some jurisdictions in which we may operate could presently be unregulated or partially regulated and therefore more susceptible to the enactment or change of laws and regulations.

We offer our DFS product offering in 24 U.S. states that have adopted legislation permitting online fantasy sports. In those states that currently require a license or registration, we have either obtained the appropriate license or registration, have obtained a provisional license, or are operating pursuant to a grandfathering clause that allows operation pending the availability of licensing applications and subsequent grant of a license. We also operate DFS in the United Kingdom pursuant to a license issued by the United Kingdom Gambling Commission.

We also operate our DFS product offering in 20 U.S. states, Washington D.C., and certain provinces in Canada that, in each case, do not have fantasy sports-specific laws or regulations. In those jurisdictions, our business has been, and in the future may be, subject to future legislative and regulatory action, court decisions or other governmental action that could alter or

eliminate our ability to operate. For example, in certain states in which we operate, including Texas and Florida, the applicable office of the Attorney General has issued an adverse legal opinion regarding DFS and other fantasy sports. In the event that one of those Attorneys General decides to take action on the opinion from their office, we may have to withdraw our paid DFS operations from such state, which could have a material adverse effect on our business, financial condition and results of operations.

In May 2018, the U.S. Supreme Court struck down PASPA as unconstitutional. This decision has the effect of lifting federal restrictions on sports betting and thus allowing states to determine the legality of sports betting for themselves. Since the repeal of PASPA, several states (and Washington D.C.) have legalized online sports betting. To the extent new real money gaming or sports betting jurisdictions are established or expanded, we cannot guarantee that we will be successful in entering such new jurisdictions or expanding our business or user base in line with the growth of existing jurisdictions. If we are unable to effectively develop and operate directly or indirectly within these new jurisdictions or if our competitors are able to successfully enter jurisdictions that we cannot access or where we face other restrictions, there could be a material adverse effect on our business, operating results and financial condition. Our failure to obtain or maintain the necessary regulatory approvals in jurisdictions, whether individually or collectively, would have a material adverse effect on our business. See “Business — Government Regulation.” To expand into new jurisdictions, we may need to be licensed and obtain approvals of our product offerings. This is a time-consuming process that can be costly. Any delays in obtaining or difficulty in maintaining regulatory approvals needed for expansion within existing jurisdictions or into new jurisdictions can negatively affect our opportunities for growth, including the growth of our customer base, or delay our ability to recognize revenue from our product offerings in any such jurisdictions.

Future legislative and regulatory action, and court decisions or other governmental action, may have a material impact on our operations and financial results. Governmental authorities could view us as having violated local laws, despite our efforts to obtain all applicable licenses or approvals. There is also a risk that civil and criminal proceedings, including class actions, brought by or on behalf of prosecutors or public entities or incumbent monopoly providers, or private individuals, could be initiated against us, Internet service providers, credit card and other payment processors, advertisers and others involved in the offering of Sportsbook, iGaming and DFS product offerings. Such potential proceedings could involve substantial litigation expense, penalties, fines, seizure of assets, injunctions or other restrictions being imposed upon us or our licensees or other business partners, while diverting the attention of key executives. Such proceedings could have a material adverse effect on our business, financial condition, results of operations and prospects, as well as impact our reputation.

There can be no assurance that legally enforceable legislation will not be proposed and passed in jurisdictions relevant or potentially relevant to our business to prohibit, legislate or regulate various aspects of Sportsbook, iGaming and DFS product offerings (or that existing laws or regulations in those jurisdictions will not be changed or interpreted negatively). Compliance with any such legislation may have a material adverse effect on our business, financial condition and results of operations, either as a result of our determination that a jurisdiction should be blocked, or because a local license or approval may be costly for us or our business partners to obtain and/or such licenses or approvals may contain other commercially undesirable conditions.

Our income tax expense is computed based on tax rates at the time of the respective financial period. Our future effective tax rates, financial condition and results from operations could be unfavorably affected by changes in the tax rates in jurisdictions where our income is earned, by changes in the tax rules and regulations or the interpretation of tax rules and regulations in the jurisdictions in which we do business or by changes in the valuation of our deferred tax assets. For example, the Organization for Economic Cooperation and Development has been working on a Base Erosion and Profit Shifting Project and released an implementation package in December 2023 which provides a coordinated system to ensure that multinational enterprises pay a global minimum tax. The guidelines and proposals may change aspects of the existing framework under which our tax obligations are determined in many of the countries where we do business. Similarly, the European Commission and several countries have issued proposals that would change aspects of the current tax framework under which we are taxed. These proposals include changes to the existing income tax framework, possibilities of a global minimum tax, and proposals to change or impose new types of non-income taxes, including taxes based on a percentage of revenue.

Compliance with data privacy and security laws and regulations could require us to incur significant expenses and failure to comply with such laws and regulations could carry penalties and potential criminal sanctions, as well as risk of litigation.

In the context of our European Union (“EU”) operations, we may be subject to specific compliance obligations under the General Data Protection Regulation (EU) 2016/679 (the “GDPR”) and associated laws and regulations in different EU Member States in which we operate. In addition, portions of our business established outside the EU may be required to comply with the requirements of the GDPR and associated EU legislation with respect to the offering of products or services to, or the

monitoring of, individuals in the EU. We may also be subject to the local privacy and data protection laws of the EU Member States in which we offer products or services. Failure to comply with these EU data protection and privacy laws can carry penalties and potential criminal sanctions, as well as the risk of litigation. In addition, Directive 2002/58/EC (as amended by Directive 2009/136/EC) (together, the “e-Privacy Directive”) governs, among other things, the use of cookies and the sending of electronic direct marketing within the EU and, as such, will apply to our marketing activities within the EU. Following Brexit, the UK has adopted its own data protection and direct marketing laws (the “UK data protection laws”) which are currently based on the corresponding EU legislation. Our UK-facing operations may therefore be subject to specific compliance obligations under the UK data protection laws.

In our efforts to comply with the GDPR, the e-Privacy Directive and the UK data protection laws, we rely on positions and interpretations of the law that have yet to be fully tested before the relevant courts and regulators. While the UK data protection laws are currently similar to the corresponding EU laws, it is possible that those laws will diverge in the future; to the extent that those laws do diverge, then that may increase the costs of maintaining regulatory compliance. There is also a risk that it may become more difficult to make cross-border transfers of personal data, as a result of diverging data protection regimes in the territories where our customers are located and the territories where our operations are based. If a regulator or court of competent jurisdiction determined that one or more of our compliance efforts does not satisfy the applicable requirements of the GDPR or the e-Privacy Directive, or the UK data protection laws, or if any party brought a claim in this regard, there could be potential governmental or regulatory investigations, enforcement actions, regulatory fines, compliance orders, litigation or public statements against us by consumer advocacy groups or others, and that could cause customers to lose trust in us and damage our reputation. Likewise, a change in guidance could be costly and have an adverse effect on our business.

We may also face similar compliance risks in connection with requirements under North American privacy and data protection laws, including the California Consumer Privacy Act and its implementing regulations, Virginia’s Consumer Data Protection Act and certain other privacy and data protections laws enacted by other jurisdictions from time to time. Non-compliance with such requirements may result in civil penalties and orders that require us to change the way we process data. In the event of a data breach, we are also subject to breach notification laws in the jurisdictions in which we operate and the risk of litigation and regulatory enforcement actions.

Our growth prospects depend on the legal status of real-money gaming in various jurisdictions, predominantly within the United States, and legalization may not occur in as many jurisdictions as we expect, or may occur at a slower pace than we anticipate. Additionally, even if jurisdictions legalize real money gaming, this may be accompanied by legislative or regulatory restrictions and/or taxes that make it impracticable or less attractive to operate in those jurisdictions, or the process of implementing regulations or securing the necessary licenses to operate in a particular jurisdiction may take longer than we anticipate, or existing laws or regulations may be changed or interpreted adversely, any of which could adversely affect our future results of operations and make it more difficult to meet our expectations for financial performance.

A number of states have legalized, or are currently considering legalizing, real money online sports betting and iGaming, and our business, financial condition, results of operations and prospects are significantly dependent upon such legalization. Our business plan is partially based upon the legalization of real money online sports betting and iGaming for a specific percentage of the U.S. population on a yearly basis and such rate of legalization may not occur as we have anticipated. Additionally, if a large number of additional jurisdictions or the federal government enact real money sports betting or iGaming legislation and we are unable to obtain, or are otherwise delayed in obtaining, the necessary licenses to operate online sports betting or iGaming websites in such jurisdictions, our future growth in online sports betting and iGaming could be materially impaired. Furthermore, for those jurisdictions that have enacted real-money sports betting or iGaming laws or regulations, such laws and regulations could be amended or interpreted adversely, which could impose additional restrictions or costs that could have an adverse effect on our business.

As we enter into new jurisdictions, the relevant jurisdiction may legalize real money sports betting and iGaming in a manner that is unfavorable to us. As a result, we may encounter unexpected legal, regulatory and political challenges, which could result in an unforeseen adverse impact on planned revenues or costs associated with the new opportunity. For example, certain states require us to have a relationship with a retail operator in order to offer our online Sportsbook product offering, which tends to increase our costs of revenue. States that have established state-run monopolies may limit opportunities for private sector participants like us. States also impose substantial tax rates on online sports betting and iGaming revenue in addition to, in the case of online sports betting, the federal excise tax of 25 basis points on the amount of each wager. As most state product taxes apply to various measures of modified gross profit, tax rates, whether federal- or state-based, that are higher than we expect will make it more costly and less desirable for us to launch in a given jurisdiction, while tax increases in any of our existing jurisdictions may adversely impact our profitability.

Therefore, even in cases in which a jurisdiction licenses and regulates Sportsbook, iGaming or DFS, the licensing and regulatory regimes can vary considerably in terms of their business-friendliness and at times may be intended to provide incumbent operators with advantages over new licensees. Therefore, certain “liberalized” regulatory regimes are considerably more commercially attractive than others.

Failure to comply with regulatory requirements in a particular jurisdiction, or the failure to successfully obtain a license or permit applied for in a particular jurisdiction, could impact our ability to comply with licensing and regulatory requirements in other jurisdictions, or could cause the rejection of license applications or cancellation of existing licenses in other jurisdictions, or could cause financial institutions, online and mobile platforms, advertisers and distributors to stop providing services to us which we rely upon to receive payments from, or distribute amounts to, our users, or otherwise to deliver and promote our product offerings and services.

Compliance with the various regulations applicable to fantasy sports and real money sports betting and iGaming is costly and time-consuming. Regulatory authorities at the non-U.S. and U.S. federal, state and local levels have broad powers with respect to the regulation and licensing of fantasy sports and real money gaming operations and may revoke, suspend, condition or limit our fantasy sports or real money gaming licenses, impose substantial fines on us and take other actions, any one of which could have a material adverse effect on our business, financial condition, results of operations and prospects. These laws and regulations are dynamic and subject to potentially differing interpretations, and various legislative and regulatory bodies may expand current laws or regulations or enact new laws and regulations regarding these matters. We endeavor to comply with all applicable laws and regulations relating to our business. It is possible, however, that these requirements may be interpreted and applied in a manner that is inconsistent from one jurisdiction to another and may conflict with other rules. Non-compliance with any such law or regulations could expose us to claims, proceedings, litigation and investigations by private parties and regulatory authorities, as well as substantial fines and negative publicity, each of which may materially and adversely affect our business.

Any fantasy sports or real money gaming license could be revoked, suspended or conditioned at any time. The loss of a license in one jurisdiction could trigger the loss of a license or affect our eligibility for such a license in another jurisdiction, and any of such losses, or potential for such loss, could cause us to cease offering some or all of our product offerings in the impacted jurisdictions. We may be unable to obtain or maintain all necessary registrations, licenses, permits or approvals, and could incur fines or experience delays related to the licensing process, which could adversely affect our operations. Our delay or failure to obtain or maintain licenses in any jurisdiction may prevent us from distributing our product offerings, increasing our customer base and/or generating revenues. We cannot assure you that we will be able to obtain and maintain the licenses and related approvals necessary to conduct our Sportsbook, iGaming and DFS operations. Any failure to maintain or renew our existing licenses, registrations, permits or approvals could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our growth prospects and market potential will depend on our ability to obtain licenses to operate in a number of jurisdictions, and if we fail to obtain and subsequently maintain such licenses, our business, financial condition, results of operations and prospects could be impaired.

Our ability to grow our business will depend on our ability to obtain and maintain licenses to offer our product offerings in a large number of jurisdictions or in heavily populated jurisdictions. Regulated gaming license applications and audits frequently involve an in-depth suitability review of the applicant’s business and operations and associated individuals including certain officers, directors, key employees and significant stockholders. These applications and audits take substantial time to prepare, submit, and complete, often requiring the production of multiple years’ worth of business and personal financial records and disclosures which take considerable time to compile, followed by the regulator’s investigatory process which may take months or even years to complete. If we fail to obtain and maintain licenses in large jurisdictions or in a greater number of mid-market jurisdictions, this may prevent us from expanding the footprint of our product offerings, increasing our user base and/or generating revenues. We cannot be certain that we will be able to obtain and maintain licenses and related approvals necessary to conduct our Sportsbook, iGaming and DFS operations in a timely manner or at all. Any failure to obtain and maintain licenses, registrations, permits or approvals could have a material adverse effect on our business, financial condition, results of operations and prospects.

We have been, and continue to be, the subject of governmental investigations and inquiries with respect to the operation of our businesses, and we could be subject to future governmental investigations and inquiries, legal proceedings and enforcement actions. Any such investigation, inquiry, proceeding or action, could adversely affect our business.

We have received formal and informal inquiries from time to time, from government authorities and regulators, including tax authorities and gaming regulators, regarding compliance with laws and other matters, and we may receive such inquiries in the future, particularly as we grow and expand our operations. Violation of existing or future regulations, regulatory orders or consent decrees could subject us to substantial monetary fines and other penalties that could negatively affect our financial condition and results of operations. In addition, it is possible that future orders issued by, or inquiries or enforcement actions initiated by, government or regulatory authorities could cause us to incur substantial costs, expose us to unanticipated liability or penalties, or require us to change our business practices in a manner materially adverse to our business.

Participation in the sports betting industry exposes us to trading, liability management and pricing risk. We may experience lower than expected profitability and potentially significant losses as a result of a failure to determine accurately the odds in relation to any particular event and/or any failure of our sports risk management processes due to a variety of factors beyond our control.

Our fixed-odds betting product offerings involve betting where winnings are paid on the basis of the stake placed and the odds quoted. Odds are determined with the objective of providing an average return to the bookmaker over a large number of events and therefore, over the long term, our gross win percentage has remained fairly constant. However, there can be significant variation in gross win percentage event-by-event and day-by-day. We have systems and controls that seek to reduce the risk of daily losses occurring on a gross-win basis, but there can be no assurance that these will be effective in reducing our exposure, and consequently our exposure to this risk in the future. As a result, in the short term, there is less certainty of generating a positive gross win, and we have from time to time experienced, and may in the future experience, significant losses with respect to individual events or betting outcomes, in particular if large individual bets are placed on an event or betting outcome or series of events or betting outcomes. Odds compilers and risk managers are capable of human error, thus even allowing for the fact that a number of betting products are subject to capped pay-outs, significant volatility can occur. In addition, it is possible that there may be such a high volume of trading during any particular period that even automated systems would be unable to address and mitigate all risks. Any significant losses on a gross-win basis could have a material adverse effect on our business, financial condition, results of operations and cash flows. In addition, if a jurisdiction where we hold or wish to apply for a license imposes a high turnover tax for betting (as opposed to a gross-win tax), this would also impact profitability, particularly with high value/low margin bets, and likewise have a material adverse effect on our business.

Palpable (obvious) errors in Sportsbook odds making may occasionally occur in the normal course of business, sometimes for large liabilities. While it is a worldwide standard business practice to void bets associated with palpable errors or to correct the odds, there is no guarantee regulators will approve voiding palpable errors in every case.

Our Sportsbook offers a huge spectrum of betting markets across dozens of sports, and the odds are set through a combination of algorithmic and manual odds making. Bet acceptance is also a combination of automatic and manual acceptance. In some cases, the odds offered on our Sportsbook constitute an obvious error. Examples of such errors are inverted lines between teams, or odds that are significantly different from the true odds of the outcome in a way that all reasonable persons would agree is an error. It is generally commonplace worldwide for operators to void bets associated with such palpable errors, and, in most mature jurisdictions, these bets can be voided without regulatory approval at operator discretion. In the U.S., it is unclear long term if state-by-state regulators will consistently approve the voiding of bets or re-setting odds to correct odds on such bets. In some cases, we require regulatory approval to void palpable errors ahead of time. If regulators were to not allow voiding of bets associated with large obvious errors in odds making, we could be subject to covering significant liabilities.

We follow the industry practice of restricting and managing betting limits at the individual customer level based on individual customer profiles and risk level to the enterprise; however, there is no guarantee that jurisdictions will allow operators such as us to limit on the individual customer level.

It is customary for sports betting operators to manage customer betting limits at the individual level to manage enterprise risk levels. We believe this practice is beneficial overall, because if it were not possible, betting options would be restricted globally and limits available to customers would be much lower to insulate overall risk due to the existence of a small segment of highly sophisticated syndicates and algorithmic bettors, or bettors looking to take advantage of errors and omissions on our platforms. We believe virtually all operators balance taking reasonable action from all customers against the risk of individual customers significantly harming business viability. We cannot assure you that all state legislation and regulators will always allow operators to execute limits at the individual customer level, or at their sole discretion.

Negative events or negative media coverage relating to, or a declining popularity of, sports betting, online sports betting, daily fantasy sports, or the underlying sports or athletes, or iGaming in particular, or other negative coverage may adversely impact our ability to retain or attract users, which could have an adverse impact on our business.

Public opinion can significantly influence our business. Unfavorable publicity regarding us, for example, our product changes, product quality, litigation, or regulatory activity, or regarding the actions of third parties with whom we have relationships or the underlying sports (including declining popularity of the sports or athletes) could seriously harm our reputation. In addition, a negative shift in the perception of sports betting and iGaming by the public or by politicians, lobbyists or others could affect future legislation of sports betting and iGaming, which could cause jurisdictions to abandon proposals to legalize sports betting and iGaming, thereby limiting the number of jurisdictions in which we are permitted to operate. Furthermore, illegal betting activity by athletes could result in negative publicity for our industry and could harm our brand reputation. Negative public perception could also lead to new restrictions on, or the prohibition of, iGaming or sports betting in jurisdictions in which we currently operate. Such negative publicity could also adversely affect the size, demographics, engagement and loyalty of our customer base and result in decreased revenue or slower user growth rates, which could seriously harm our business.

We may have difficulty accessing the service of banks, credit card issuers and payment processing service providers, which may make it difficult to offer our product offerings and services.

Although financial institutions and payment processors are permitted to provide services to us and others in our industry, banks, credit card issuers and payment processing service providers may be hesitant to offer banking and payment processing services to real money gaming and fantasy sports businesses. Consequently, those businesses involved in our industry, including our own, may encounter difficulties in establishing and maintaining banking and payment processing relationships with a full scope of services and generating market rate interest. If we are unable to maintain our bank accounts or our users are unable to use their credit cards, bank accounts or e-wallets to make deposits and withdrawals from our product offerings, it would make it difficult for us to operate our business, increase our operating costs, and pose additional operational, logistical and security challenges which could result in an inability to implement our business plan.

The requirements of being a public company may strain our resources and divert management's attention, and additional legal, accounting and compliance expenses may be greater than we anticipate.

We became a public company following the consummation of the transactions contemplated by the Business Combination Agreement dated December 22, 2019, as amended on April 7, 2020 (the "DEAC Business Combination"), with Diamond Eagle Acquisition Corp. ("DEAC"), and as such, we have incurred, and will continue to incur, significant legal, accounting and other expenses that DraftKings and SBTech did not incur as private companies. We are subject to the reporting requirements of the Exchange Act, and we are required to comply with the applicable requirements of the Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley") and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as the rules and regulations subsequently implemented by the SEC and the listing standards of The Nasdaq Stock Market, including changes in corporate governance practices and the establishment and maintenance of effective disclosure and financial controls. Compliance with these rules and regulations can be burdensome, and our management and other personnel are required to devote a substantial amount of time to these compliance initiatives.

Failure to maintain adequate financial, information technology and management processes and controls could result in material weaknesses and lead to errors in our financial reporting, which could adversely affect our business as a public company.

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in such internal controls. Section 404 of Sarbanes-Oxley requires that we evaluate and determine the effectiveness of our internal control over financial reporting. It also requires our independent registered public accounting firm to attest to our evaluation of our internal control over financial reporting with our Annual Report. Although our management has determined, and our independent registered public accounting firm has attested, that our internal control over financial reporting was effective as of December 31, 2023, we cannot assure you that we or our independent registered public accounting firm will not identify a material weakness in our internal controls in the future. Maintaining effective internal control over financial reporting is necessary for us to produce reliable financial reports and is important in helping to prevent financial fraud.

Our current controls and any new controls that we develop may become inadequate because of poor design and changes in our business, including increased complexity resulting from any expansion. Any failure to implement and maintain effective

internal control over financial reporting could adversely affect the results of assessments by our independent registered public accounting firm and their attestation reports.

If we are unable to certify the effectiveness of our internal controls, or if our internal controls have a material weakness, we may not detect errors in a timely fashion, our consolidated financial statements could be misstated, we could be subject to regulatory scrutiny and a loss of confidence by stakeholders, which could harm our business and adversely affect the market price of our common stock. Failure to comply with Section 404 of Sarbanes-Oxley could potentially subject us to sanctions or investigations by the SEC, FINRA or other regulatory authorities, as well as increase the risk of liability arising from litigation based on securities law.

Continued growth and success will depend on the performance of our current and future employees, including certain key employees. Recruitment and retention of these individuals is vital to growing our business and meeting our business plans. The loss of any of our key executives or other key employees could harm our business.

We depend on a limited number of key personnel to manage and operate our business, including DraftKings' co-founders, our Chief Financial Officer and our Chief Legal Officer. The leadership of these key personnel has been, and we expect will continue to be, a critical element of our success. The departure, death or disability of any one of our executive officers or other extended or permanent loss of any of their services, or any negative market or industry perception with respect to any of them or their loss, could have a material adverse effect on our business. We are not protected by key man or similar life insurance covering executive officers or members of senior management.

In addition, certain of our other employees have made significant contributions to our growth and success. We believe our success and our ability to compete and grow will depend in large part on the efforts and talents of our employees and on our ability to retain highly skilled personnel. There is significant competition for these types of personnel, and we compete with other potential employers for the services of our employees. As a result, we may not succeed in retaining our executives and other key employees. Employees, particularly analysts and engineers, are in high demand, and we devote significant resources to identifying, hiring, training, successfully integrating and retaining these employees. In addition, experienced personnel in the technology industry are in high demand. We cannot provide assurance that we will be able to attract or retain such highly qualified personnel in the future. In addition, the loss of employees or the inability to hire additional skilled employees as necessary could result in significant disruptions to our business, and the integration of replacement personnel could be time-consuming and expensive and cause additional disruptions to our business. If we do not succeed in attracting, hiring, and integrating qualified personnel, or retaining and motivating existing personnel, we may be unable to grow effectively and our business could be seriously harmed.

All of our named executive officers are employees-at-will. The unexpected loss of services of one or more of these key employees could have a material adverse effect on our business, financial condition, results of operations and prospects.

In some jurisdictions our key executives, certain employees or other individuals related to the business are, and will continue to be, subject to licensing or compliance requirements. Failure by such individuals to obtain the necessary licenses or comply with individual regulatory obligations could cause the business to be non-compliant with its obligations, or imperil its ability to obtain or maintain licenses necessary for the conduct of the business. In some cases, the remedy to such situation may require the removal of a key executive or employee and the mandatory redemption or transfer of such person's equity securities.

As part of obtaining real money gaming licenses, the responsible gaming authority will generally determine suitability of certain directors, officers and employees and, in some instances, significant stockholders. The criteria used by gaming authorities to make determinations as to who requires a finding of suitability or the suitability of an applicant to conduct gaming operations varies among jurisdictions, but generally requires extensive and detailed application disclosures followed by a thorough investigation. If any gaming authority with jurisdiction over our business were to find an applicable officer, director, employee or significant stockholder of ours unsuitable for licensing or unsuitable to continue having a relationship with us, we would be required to sever our relationship with that person or entity. Furthermore, such gaming authorities may require us to terminate the employment of any person who refuses to file required applications. Either result could have a material adverse effect on our business, operations and prospects.

In addition, our amended and restated articles of incorporation provide that any of our common stock or other equity securities owned or controlled by any stockholder whom our board of directors determines in good faith (following consultation with reputable outside gaming regulatory counsel), pursuant to a resolution adopted by the unanimous affirmative vote of all of

the disinterested members of our board of directors, is an unsuitable person, will be subject to mandatory sale and transfer to either us or one or more third-party transferees.

Additionally, a gaming regulatory body may refuse to issue or renew a gaming license or restrict or condition the same, based on our present activities or the past activities of DraftKings, SBTech or GNOG, or the past or present activities of their or our current or former directors, officers, employees, stockholders or third parties with whom we have relationships, which could adversely affect our operations or financial condition. If additional gaming regulations are adopted in a jurisdiction in which we operate, such regulations could impose restrictions or costs that could have a significant adverse effect on us. From time to time, various proposals are introduced in the legislatures of some of the jurisdictions in which we have existing or planned operations that, if enacted, could adversely affect our directors, officers, key employees, or other aspects of our operations. To date, we have obtained all governmental licenses, findings of suitability, registrations, permits and approvals necessary for our operations as currently conducted. However, we can give no assurance that any additional licenses, permits and approvals that may be required will be given or that existing ones will be renewed or will not be revoked. Renewal of licenses, permits and approvals are subject to, among other things, continued satisfaction of suitability requirements of our directors, officers, key employees and stockholders. Any failure to renew or maintain our licenses or to receive new licenses when necessary would have a material adverse effect on us.

Due to the nature of our business, we are subject to taxation in a number of jurisdictions and changes in, or new interpretations of, tax laws, tax rulings or their application by tax authorities could result in additional tax liabilities and could materially affect our financial condition and results of operations. We have been, and continue to be, subject to periodic audits and examinations by the IRS, as well as state and local taxing authorities, the results of which may materially impact our financial statements in the period in which the audit or examination occurs.

Our tax obligations are varied and include U.S. federal, state and local taxes and international taxes due to the nature of our business. The tax laws that are applicable to our business are subject to interpretation, and significant judgment is required in determining our worldwide provision for income taxes. In the course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. For example, compliance with the 2017 United States Tax Cuts and Jobs Act (the “TCJA”) required the collection of information not regularly produced within our Company, the use of estimates in our consolidated financial statements, and the exercise of significant judgment in accounting for its provisions.

As of December 31, 2023, 25 countries in Europe, the Middle East, Africa, and Asia-Pacific have enacted various aspects of the Organization for Economic Co-operation and Development’s Base Erosion and Profit Shifting (“BEPS”) 2.0 Pillar Two global minimum tax (GMT). In 24 of those countries, the GMT is effective beginning in 2024. Based on currently enacted law, the impact of GMT on our 2024 results is not expected to be material.

The gaming industry also represents a significant source of tax revenue to the jurisdictions in which we operate. Gaming companies and business-to-business providers in the gaming industry (directly and/or indirectly by way of their commercial relationships with operators) are currently subject to significant taxes and fees in addition to normal corporate income taxes, and such taxes and fees are subject to increase at any time. From time to time, various legislators and other government officials have proposed and adopted changes in tax laws, or in the administration or interpretation of such laws, affecting the gaming industry. In addition, worsening of economic conditions and the large number of jurisdictions with significant current or projected budget deficits could intensify the efforts of governments to raise revenues through increases in gaming taxes and/or other taxes. It is not possible to determine with certainty the likelihood of changes in tax laws or in the administration or interpretation or enforcement of such laws. Any material increase, or the adoption of additional taxes or fees, could have a material adverse effect on our business, financial condition, results of operations and prospects.

Additionally, tax authorities may impose indirect taxes on Internet-related commercial activity based on existing statutes and regulations which, in some cases, were established prior to the advent of the Internet. Tax authorities may interpret laws originally enacted for mature industries and apply it to newer industries, such as the online sports betting and iGaming industries. The application of such laws may be inconsistent from jurisdiction to jurisdiction. Our in-jurisdiction activities may vary from period to period which could result in differences in nexus from period to period.

We have been, and continue to be, subject to periodic review and audit by domestic and foreign tax authorities. Tax authorities may disagree with certain positions that we or our predecessors have taken or that we will take, and any adverse outcome of such a review or audit could have a negative effect on our business, financial condition and results of operations. Although we believe that our tax provisions, positions and estimates are reasonable and appropriate, tax authorities may disagree with certain positions we have taken. In addition, economic and political pressures to increase tax revenue in various jurisdictions may make resolving tax disputes favorably more difficult. We are currently under IRS audit for prior tax years, with the primary unresolved issues relating to excise taxation of fantasy sports contests and informational reporting and

withholding. The final resolution of that audit, and other audits or litigation, may differ from the amounts recorded in our consolidated financial statements included herein and may materially affect our consolidated financial statements in the period or periods in which that determination is made.

Failure to protect or enforce our intellectual property rights or the costs involved in such enforcement could harm our business, financial condition and results of operations.

We rely on trademark, copyright, patent, trade secret, and domain-name-protection laws to protect our proprietary rights. In the United States and internationally, we have filed various applications to protect aspects of our intellectual property, and currently hold a number of issued patents and registered trademarks in multiple jurisdictions. In the future we may acquire additional patents or patent portfolios or trademarks, which could require significant cash expenditures. However, third parties may knowingly or unknowingly infringe our proprietary rights, third parties may challenge proprietary rights held by us, and pending and future trademark and patent applications may not be approved. In addition, effective intellectual property protection may not be available in every country in which we operate or intend to operate our business. In any of these cases, we may be required to expend significant time and expense to prevent infringement or to enforce our rights. There can be no assurance that others will not offer products or services that are substantially similar to ours and compete with our business.

Circumstances outside our control could pose a threat to our intellectual property rights. For example, effective intellectual property protection may not be available in all jurisdictions in which our Sportsbook, DFS and iGaming product offerings are accessible. Also, the efforts we have taken to protect our proprietary rights may not be sufficient or effective. Any significant impairment of our intellectual property rights could harm our business or our ability to compete. Also, protecting our intellectual property rights is costly and time-consuming. Any unauthorized disclosure or use of our intellectual property could make it more expensive to do business, thereby harming our operating results. Furthermore, if we are unable to protect our proprietary rights or prevent unauthorized use or appropriation by third parties, the value of our brand and other intangible assets may be diminished, and competitors may be able to more effectively mimic our product offerings and services. Any of these events could have a material adverse impact on our business.

We rely on licenses to use the intellectual property rights of third parties which are incorporated into our product offerings and services. Failure to renew or expand existing licenses may require us to modify, limit or discontinue certain product offerings, which could materially affect our business, financial condition and results of operations.

We rely on products, technologies and intellectual property that we license from third parties for use in our product offerings and our gaming software services. Substantially all of our product offerings and services use intellectual property licensed from third parties. The future success of our business depends, in part, on our ability to obtain, retain and/or expand licenses for popular technologies and games in a competitive market. We cannot assure you that these third-party licenses, or support for such licensed products and technologies, will continue to be available to us on commercially reasonable terms, if at all. In the event that we cannot renew and/or expand existing licenses, we may be required to discontinue or limit our use of the product offerings that include or incorporate the licensed intellectual property.

Some of our license agreements contain minimum guaranteed royalty payments to the third party. If we are unable to generate sufficient revenue to offset the minimum guaranteed royalty payments, it could have a material adverse effect on our results of operations, cash flows and financial condition. Our license agreements generally allow for assignment in the event of a strategic transaction but contain some limited termination rights post-assignment. Certain of our license agreements grant the licensor rights to audit our use of their intellectual property. Disputes with licensors over uses or terms could result in the payment of additional royalties or penalties by us, cancellation or non-renewal of the underlying license or litigation.

The regulatory review process and licensing requirements also may preclude us from using technologies owned or developed by third parties if those parties are unwilling to subject themselves to regulatory review or do not meet regulatory requirements. Certain gaming authorities require gaming manufacturers to obtain approval before engaging in certain transactions, such as acquisitions, mergers, reorganizations, financings, stock offerings and share repurchases. Obtaining such approvals can be costly and time consuming, and we cannot assure you that such approvals will be granted or obtained on acceptable terms, or at all, or that the approval process will not result in delays or disruptions to our strategic objectives.

Our insurance may not provide adequate levels of coverage against claims.

We maintain insurance that we believe is customary for businesses of our size and type. However, there are types of losses we may incur that cannot be insured against or that we believe are not economically reasonable to insure. Moreover, any loss

incurred could exceed policy limits and policy payments made to us may not be made on a timely basis. Such losses could adversely affect our business prospects, results of operations, cash flows and financial condition.

We may incur successor liabilities due to conduct arising prior to the completion of the DEAC Business Combination.

We may be subject to certain liabilities of DK Crown Holdings Inc. (formerly DraftKings Inc.), a Delaware corporation ("DK DE"), and SBTech. For example, DK DE and SBTech at times may each become subject to litigation claims in the operation of its business, including, but not limited to, with respect to employee matters and contract matters. From time to time, we may also face intellectual property infringement, misappropriation, or invalidity/non-infringement claims from third parties, and some of these claims may lead to litigation. We may initiate claims to assert or defend their own intellectual property against third parties. Any litigation may be expensive and time-consuming and could divert management's attention from its business and negatively affect its operating results or financial condition. The outcome of any litigation cannot be guaranteed, and adverse outcomes can affect us negatively.

We currently are, and in the future may be, the subject of inquiry and investigation by governmental authorities, which could in turn lead to fines, as the regulatory landscape of sports betting and iGaming changes.

Our non-U.S. operations expose us to certain foreign currency transaction and translation risks. As a result, changes in the valuation of the U.S. dollar in relation to other currencies could have positive or negative effects on our profit and financial position.

Our non-U.S. operations expose us to foreign currency transaction and translation risks. Currency transaction risk occurs in conjunction with purchases and sales of products and services that are made in currencies other than the local currency of the subsidiary involved, for example if the parent company pays, or transfers U.S. dollars to a subsidiary in order to fund its expenses in local currencies. Currency translation risks occurs when the income statement and balance sheet of a foreign subsidiary is converted into currencies other than the local currency of the company involved, for example when the results of these subsidiaries are consolidated in the results of a parent company with a different reporting currency. As a result, our non-U.S. operations historically have been, and will continue to be, exposed to currency transaction risk relating to adverse movements in foreign currency exchange rates, which may adversely impact our financial positions and results of operations.

Our functional currency is the U.S. dollar, and as a result, we will be subject to foreign currency fluctuation due to operations by subsidiaries in non-U.S. jurisdictions, including our SBTech operations and the offering of our Sportsbook and iGaming product offerings in Ontario, Canada, and the fact that certain of our revenues, operating expenses and assets and liabilities are non-U.S. dollar denominated. For example, an increase in the value of non-U.S. dollar currencies against the U.S. dollar could increase costs for delivery of products and services and also increase cost of local operating expenses and procurement of materials or services that we must purchase in foreign currencies by increasing labor and other costs that are denominated in such local currencies. These risks related to exchange rate fluctuations may increase in future periods in the event that our non-U.S. operations expand. In 2023 and 2022, our exposure to foreign currency transaction and translation risks were not material. While we do not otherwise hedge our foreign exchange exposure, we may consider doing so in the future.

Foreign currency exchange rate volatility, as well as the cost of any hedging arrangements entered into in the future, may negatively affect our financial position and results of operations, and may adversely impact the comparability of results between periods.

Risk Factors Relating to our Indebtedness

We have substantial debt outstanding and may incur additional debt.

As of December 31, 2023, our total long-term debt was approximately \$1,253.8 million, net of issuance costs. Our debt levels could have significant consequences, including:

- making it more difficult to satisfy our obligations;
- a dilutive effect on our outstanding equity capital or future earnings;
- increasing our vulnerability to general adverse economic conditions;

- requiring us to devote a substantial portion of our cash to make payments on our debt, thereby reducing the amount of cash available for other purposes. As a result, we would have limited financial and operating flexibility in responding to changing economic and competitive conditions;
- limiting our ability to raise additional debt because it may be more difficult for us to obtain debt financing on attractive terms; and
- placing us at a disadvantage compared to our competitors that are less leveraged.

In addition, we may incur substantial additional debt in the future. The terms of the indenture governing our zero-coupon convertible senior notes in an aggregate principal amount of \$1,265.0 million, which includes proceeds from the full exercise of the over-allotment option (collectively, the “Convertible Notes”), and the loan and security agreement with Pacific Western Bank and Citizens Bank, as lenders, which provides the Company with a revolving line of credit of up to \$125.0 million, permit us to incur additional debt, subject to certain limitations set forth therein. If new debt is incurred in addition to our current debt levels, the foregoing risks may be augmented.

The conditional conversion features of the Convertible Notes, if triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion features of the Convertible Notes are triggered, holders of the Convertible Notes will be entitled to convert the Convertible Notes at any time during specified periods at their option. If one or more holders elect to convert their Convertible Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our Class A common stock, we would be required to make cash payments to satisfy all or a portion of our conversion obligation based on the conversion rate, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their Convertible Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Convertible Notes as a current rather than long-term liability, which could result in a material reduction of our net working capital.

The Capped Call Transactions may affect the value of the Convertible Notes and our Class A common stock.

In connection with the issuance of the Convertible Notes, we entered into privately negotiated capped call transactions (the “Capped Call Transactions”) with certain counterparties (the “Hedge Counterparties”). The Capped Call Transactions are expected to reduce the potential dilution to the holders of our Class A common stock and/or offset potential cash payments we are required to make in excess of the principal amount upon conversion of the Convertible Notes. In connection with establishing its initial hedge of a Capped Call Transaction, the applicable Hedge Counterparty and/or its affiliates may have purchased shares of our Class A common stock and/or entered into various derivative transactions with respect to our Class A common stock concurrently with or shortly after the pricing of the Convertible Notes.

This activity may increase (or reduce the size of any decrease in) the market price of our Class A common stock or the Convertible Notes at that time. In addition, each Hedge Counterparty or an affiliate thereof may modify its hedge position by entering into or unwinding various derivatives with respect to our Class A common stock and/or purchasing or selling our Class A common stock or other securities of ours in secondary market transactions prior to the maturity of the Convertible Notes (and are likely to do so during any observation period related to a conversion of Convertible Notes). Any of these activities could cause or prevent an increase or decline in the market price of our Class A common stock or the Convertible Notes. In addition, if the Capped Call Transactions fail to become effective, each Hedge Counterparty may unwind its hedge position with respect to our Class A common stock, which could adversely affect trading in and the value of our Class A common stock and the value of the Convertible Notes.

We are subject to counterparty risk with respect to the Capped Call Transactions.

The Hedge Counterparties to the Capped Call Transactions are financial institutions, and we will be subject to the risk that the Hedge Counterparties may default or otherwise fail to perform, or may exercise certain rights to terminate, their obligations under the Capped Call Transactions. Our exposure to the credit risk of the Hedge Counterparties under the Capped Call Transactions will not be secured by any collateral. In the past, economic conditions have resulted in the actual or perceived failure or financial difficulties of a number of financial institutions, including the bankruptcy of Lehman Brothers Holdings Inc. and various of its affiliates. If a Hedge Counterparty becomes subject to insolvency proceedings, we will be an unsecured creditor in those proceedings with a claim equal to our exposure at that time under our transactions with them. Our exposure

will depend on many factors. Generally, the increase in our exposure will be correlated to the increase in the market price and in the volatility of our Class A common stock. In addition, as a result of a default by any counterparty to the Capped Call Transactions, we may suffer more dilution than we currently anticipate with respect to our Class A common stock. We can provide no assurances as to the financial stability or viability of any counterparty under the Capped Call Transactions.

Risk Factors Relating to Our Common Stock

The trading price of our Class A common stock has been, and will likely continue to be, volatile and you could lose all or part of your investment.

The trading price of our Class A common stock has been, and will likely continue to be, volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control. Any of the factors listed below could have a material adverse effect on your investment in our Class A common stock, and our Class A common stock may trade at prices significantly below the price you paid for them. In such circumstances, the trading price of our securities may not recover and may experience a further decline.

Factors affecting the trading price of our Class A common stock may include:

- actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- changes in the market's expectations about our operating results;
- success of competitors;
- lack of adjacent competitors;
- our operating results failing to meet the expectation of securities analysts or investors in a particular period;
- changes in financial estimates and recommendations by securities analysts concerning DraftKings or the industries in which we operate in general;
- operating and stock price performance of other companies that investors deem comparable to us;
- our ability to market new and enhanced product offerings and services on a timely basis;
- changes in laws and regulations affecting our business;
- commencement of, or involvement in, litigation involving us;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- the volume of shares of our Class A common stock available for public sale;
- any major change in our board of directors or management;
- sales of substantial amounts of our Class A common stock by our directors, executive officers or significant stockholders or the perception that such sales could occur; and
- general economic and political conditions such as recessions, inflation, rising interest rates, fuel prices, international currency fluctuations and acts of war or terrorism.

Broad market and industry factors may materially harm the market price of our Class A common stock irrespective of our operating performance. The stock market in general, and securities traded on Nasdaq in particular, have experienced price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the affected companies. The trading prices and valuations of these stocks, and of our Class A common stock, may not be predictable. A loss of investor confidence in the market for the stocks of other companies which investors perceive to be similar to us could depress our stock price regardless of our business, prospects, financial conditions or results of operations. A decline in the market price of our Class A common stock also could adversely affect our ability to issue additional securities and our ability to obtain additional financing in the future.

Sales of substantial amounts of Class A common stock in the public market, or the perception that such sales may occur, could cause the market price for our Class A common stock to decline.

The sale of shares of our Class A common stock in the public market, or the perception that such sales could occur, could harm the prevailing market price of shares of our Class A common stock. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

There were a total of 472.7 million shares of our Class A common stock outstanding as of December 31, 2023. In addition, we have reserved shares of Class A common stock for issuance under the DraftKings Inc. 2020 Incentive Plan (the “Incentive Plan”) and under the DraftKings Employee Stock Purchase Plan (the “ESPP”). Additionally, each of our Incentive Plan and ESPP currently provide for an automatic increase in the number of shares that will be reserved for issuance. Any shares of Class A common stock that we issue under our Incentive Plan, ESPP or other equity incentive plans that we may adopt in the future would dilute the percentage ownership held by holders of Class A common stock.

In connection with the DEAC Business Combination, the GNOG Transaction, and equity offerings by the Company, we, our executive officers and directors and selling stockholders entered into agreements restricting their ability to sell their shares of Class A common stock. As restrictions on resale end or if these stockholders exercise their sale, exchange or registration rights and sell shares or are perceived by the market as intending to sell shares, the market price of our shares of Class A common stock could drop significantly. These factors could also make it more difficult for us to raise additional funds through future offerings of our shares of Class A common stock or other securities.

In the future, we may also issue securities in connection with investments, acquisitions or capital raising activities. In particular, the number of shares of our Class A common stock issued in connection with an investment or acquisition, or to raise additional equity capital, could constitute a material portion of our then-outstanding shares of our Class A common stock. Any such issuance of additional securities in the future may result in additional dilution to you or may adversely impact the price of our Class A common stock.

We may be required to take write-downs or write-offs, restructuring and impairment or other charges that could have a significant negative effect on our financial condition, results of operations and stock price, which could cause you to lose some or all of your investment.

We may be forced to write-down or write-off assets, restructure our operations, or incur impairment or other charges that could result in losses. Even though these charges may be non-cash items and not have an immediate impact on our liquidity, the fact that we report charges of this nature could contribute to negative market perceptions about us or our securities. In addition, charges of this nature may cause us to violate net worth or other covenants to which we may be subject. Accordingly, a stockholder could suffer a reduction in the value of their shares of Class A common stock.

The coverage of our business or our Class A common stock by securities or industry analysts or the absence thereof could adversely affect our securities and trading volume.

The trading market for our Class A common stock is influenced in part by the research and other reports that industry or securities analysts publish about us or our business or industry from time to time. We do not control these analysts, or the content and opinions included in their reports. Analysts who publish information about our securities may have had relatively little experience with our Company given our limited history as a public company, which could affect their ability to accurately forecast our results and make it more likely that we fail to meet their estimates. If analysts do cover us and one or more of them downgrade our securities, or if they issue other unfavorable commentary about us or our industry or inaccurate research, our stock price would likely decline. Furthermore, if one or more of these analysts cease coverage or fail to regularly publish reports on us, we could lose visibility in the financial markets. Any of the foregoing would likely cause our stock price and trading volume to decline.

Because we are a “controlled company” under The Nasdaq Stock Market listing standards, our stockholders may not have certain corporate governance protections that are available to stockholders of companies that are not controlled companies.

So long as more than 50% of the voting power for the election of directors of DraftKings Inc. is held by an individual, a group or another company, we will qualify as a “controlled company” under The Nasdaq Stock Market listing requirements. Mr. Robins controls a majority of the voting power of our outstanding capital stock. As a result, we are a “controlled company”

under The Nasdaq Stock Market listing standards and are not subject to the requirements that would otherwise require us to have: (i) a majority of independent directors; (ii) a nominating committee comprised solely of independent directors; (iii) compensation of our executive officers determined by a majority of the independent directors or a compensation committee comprised solely of independent directors; and (iv) director nominees selected, or recommended for the Board's selection, either by a majority of the independent directors or a nominating committee comprised solely of independent directors.

Mr. Robins may have his interest in DraftKings diluted due to future equity issuances or his own actions in selling shares of Class A common stock, in each case, which could result in a loss of the "controlled company" exemption under The Nasdaq Stock Market listing rules. We would then be required to comply with those provisions of The Nasdaq Stock Market listing requirements.

Our dual class structure has the effect of concentrating voting power with our Chief Executive Officer and Chairman, which limits an investor's ability to influence the outcome of important transactions, including a change in control.

Shares of our Class B common stock are entitled to 10 votes per share, while shares of our Class A common stock are entitled to one vote per share. Mr. Robins, our Chief Executive Officer and Chairman, holds all of the issued and outstanding shares of our Class B common stock. Accordingly, Mr. Robins holds approximately 89% of the voting power of our capital stock and will be able to control matters submitted to our stockholders for approval, including the election of directors, amendments of our organizational documents and any merger, consolidation, sale of all or substantially all of our assets or other major corporate transactions. Mr. Robins may have interests that differ from yours and may vote in a way with which you disagree, and which may be adverse to your interests. This concentrated control may have the effect of delaying, preventing or deterring a change in control of DraftKings, could deprive our stockholders of an opportunity to receive a premium for their capital stock as part of a sale of DraftKings, and might ultimately affect the market price of shares of our Class A common stock.

Our dual class structure may affect the trading price of our Class A common stock.

Our dual class structure may result in volatility in the market price of our Class A common stock whether due to adverse publicity or reaction from institutional or other investors or proxy advisory firms. For example, certain index providers have announced restrictions on including companies with multiple-class share structures in certain of their indices. In July 2017, FTSE Russell and S&P Dow Jones announced that they would cease to allow most newly public companies with dual or multi-class capital structures to be included in their indices. Beginning in 2017, MSCI, a leading stock index provider, opened public consultations on their treatment of no-vote and multi-class structures and temporarily barred new multi-class listings from certain of its indices; however, in October 2018, MSCI announced its decision to include equity securities "with unequal voting structures" in its indices and to launch a new index that specifically includes voting rights in its eligibility criteria. In 2023, S&P Dow Jones updated the share class eligibility rule to allow companies with multiple share class structures to be included in the S&P Composite 1500 Index and its component indices including the S&P 500. After this rule change by S&P Dow Jones, the Russell 2000 has, and other indices may have, limitations on inclusion based on multiple share class structures. Under the announced policies, our dual class capital structure would make us ineligible for inclusion in certain indices, and as a result, mutual funds, exchange-traded funds and other investment vehicles that attempt to passively track those indices will not be investing in our stock. These policies are still fairly new and it is as of yet unclear what effect, if any, they will have on the valuations of publicly traded companies excluded from the indices, but it is possible that they may depress these valuations compared to those of other similar companies that are included. Because of our dual class structure, we have been and will likely continue to be excluded from certain of these indexes and we cannot assure you that other stock indexes will not take similar actions. Given the sustained flow of investment funds into passive strategies that seek to track certain indexes, exclusion from stock indexes would likely preclude investment by many of these funds and could make shares of our Class A common stock less attractive to other investors. As a result, the market price of shares of our Class A common stock could be adversely affected.

Nevada law and provisions of our amended and restated articles of incorporation and amended and restated bylaws could make a takeover proposal more difficult.

Our organizational documents are governed by Nevada law. Certain provisions of Nevada law and of our amended and restated articles of incorporation and amended and restated bylaws could discourage, delay, defer or prevent a merger, tender offer, proxy contest or other change of control transaction that a stockholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares of Class A common stock held by our stockholders. These provisions provide for, among other things:

- the ability of our board of directors to issue one or more series of preferred stock;
- stockholder action by written consent only until the first time when Mr. Robins ceases to beneficially own a majority of the voting power of our capital stock;
- certain limitations on convening special stockholder meetings;
- advance notice for nominations of directors by stockholders and for stockholders to include matters to be considered at our annual meetings;
- amendment of certain provisions of the organizational documents only by the affirmative vote of (i) a majority of the voting power of our capital stock so long as Mr. Robins beneficially owns shares representing a majority of the voting power of our capital stock and (ii) at least two-thirds of the voting power of the capital stock from and after the time that Mr. Robins ceases to beneficially own shares representing a majority of the voting power of our voting stock; and
- a dual class common stock structure, which provides Mr. Robins with the ability to control the outcome of matters requiring stockholder approval, even though Mr. Robins owns less than a majority of the outstanding shares of our capital stock.

These anti-takeover provisions as well as certain provisions of Nevada law could make it more difficult for a third party to acquire DraftKings, even if the third party's offer may be considered beneficial by many of our stockholders. As a result, our stockholders may be limited in their ability to obtain a premium for their shares of Class A common stock. If prospective takeovers are not consummated for any reason, we may experience negative reactions from the financial markets, including negative impacts on the price of our Class A common stock. These provisions could also discourage proxy contests and make it more difficult for our stockholders to elect directors of their choosing and to cause us to take other corporate actions.

Our amended and restated articles of incorporation designate the Eighth Judicial District Court of Clark County, Nevada as the exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our amended and restated articles of incorporation require that, to the fullest extent permitted by law, and unless we otherwise consent in writing to the selection of an alternative forum, the Eighth Judicial District Court of Clark County, Nevada (or if the Eighth Judicial District Court of Clark County, Nevada does not have jurisdiction, any other state district court located in the State of Nevada, and if no state district court in the State of Nevada has jurisdiction, any federal court located in the State of Nevada), will be the exclusive forum for each of the following:

- any action or proceeding brought in the name or right of DraftKings or on its behalf;
- any action asserting a claim for breach of any fiduciary duty owed by any director, officer, employee or agent of DraftKings to DraftKings or its stockholders;
- any action asserting a claim arising pursuant to any provision of NRS Chapters 78 or 92A, our amended and restated articles of incorporation or our amended and restated bylaws;
- any action to interpret, apply, enforce or determine the validity of our amended and restated articles of incorporation or our amended and restated bylaws; or
- any action asserting a claim governed by the internal affairs doctrine.

The exclusive forum provision provides federal courts located in the State of Nevada as the forum for suits brought to enforce any duty or liability for which Section 27 of the Exchange Act establishes exclusive jurisdiction with the federal courts, or any other claim for which the federal courts have exclusive jurisdiction. In addition, Section 22 of the Securities Act of 1933, as amended (the "Securities Act"), provides that federal and state courts have concurrent jurisdiction over lawsuits brought under the Securities Act or the rules and regulations thereunder. To the extent the exclusive forum provision restricts the courts in which claims arising under the Securities Act may be brought, there is uncertainty as to whether a court would enforce such a provision. We note that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Although we believe this provision will benefit DraftKings by providing increased consistency in the application of

Nevada law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

Item 1B. Unresolved Staff Comments.

None.

Item 1C. Cybersecurity

The Company maintains a governance structure to address cybersecurity risk, which involves a dedicated Security Operations Team (the “Security Operations Team”), an executive security steering committee (the “Executive Security Steering Committee”), and the Compliance and Risk Committee of the Board and the Board.

The Company’s Security Operations Team, led by our Chief Information Security Officer, is responsible for identifying, assessing, mitigating, and reporting on material cybersecurity risks to the Company’s Executive Security Steering Committee. The Company’s Chief Information Security Officer holds high-level licenses and certifications relating to information security, including a Certified Information Security Manager from the Information Systems Audit and Control Association and a Certified Information Systems Security Professional and a Certified Cloud Security Professional from the International Information Security System Security Certification Consortium. The Company’s Executive Security Steering Committee, chaired by the Company’s Chief Information Security Officer and comprised of various cross-functional members of senior management, drives awareness and alignment across broad stakeholder groups for cybersecurity governance and risk management and reporting. The Executive Security Steering Committee receives quarterly reports from the Company’s Chief Information Security Officer. The Compliance and Risk Committee receives regular reports from the Company’s Chief Information Security Officer. The Compliance and Risk Committee periodically reports to the Board.

The Company maintains an operational Incident Response Plan (“IRP”) that defines how the Company handles cyber incidents, including escalation, reporting and remediation procedures. The IRP is reviewed annually both internally and by third parties during regular audits. In addition, the Company retains a preferred partner with expertise in cyber risks and incidents to advise on cybersecurity related matters. The Company’s preferred partner is also part of the Company’s IRP procedures and provides independent analysis and advice during cybersecurity investigations. The Company also maintains a Security Awareness Program, which is designed, implemented, and maintained by the Company’s Chief Information Security Officer. The Company’s Security Awareness Program includes training that reinforces the Company’s information technology risk and security management policies, standards and practices, as well as the expectation that employees comply with these policies. The Security Awareness Program engages personnel through training on how to identify potential cybersecurity risks and protect the Company’s resources and information, as well as how to respond to unauthorized access to or use of Company information. The Security Awareness Program training is mandatory for all employees globally at least annually, and it is supplemented by Company-wide assessment initiatives, including periodic testing. The Company provides specialized security training for certain employee roles, such as application developers.

The Company conducts periodic tests to assess the Company’s processes and procedures and the threat landscape, which are designed with the goal of implementing and maintaining a robust cybersecurity program. Where appropriate, the Company takes additional and ongoing steps intended to strengthen the Company’s cybersecurity capabilities and mitigate the risk of a breach or incident. The Company’s security program and IT-related controls are regularly examined by internal auditors, external auditors and various regulators. For example, each year, the Company conducts various third-party audits, including SOC 2 Type2, PCI DSS, ISO 27001. The Company also engages third-party consultants for incident responses. These third-party consultants report directly to the Chief Information Security Officer and, depending on the nature of the incident, report directly to the Executive Security Steering Committee on various topics including, effects of the incident and recommendations on how to strengthen the Company’s cybersecurity capabilities and mitigate the risk of a breach or incident. In addition to assessing the Company’s cybersecurity preparedness, the Company also considers and evaluates cybersecurity risks associated with its use of third-party service providers. The Company maintains a vendor onboarding program, pursuant to which the Company regularly reviews third-party hosted applications and, when available, requests its vendors to provide SOC2 and/or ISO 27001 certificates. The Company’s assessment of risks associated with use of third-party providers is part of the Company’s overall cybersecurity risk management program.

Although we have designed our cybersecurity program and governance procedures above to mitigate cybersecurity risks, we face unknown cybersecurity risks, threats and attacks. To date, these risks, threats or attacks have not had a material impact on our operations, business strategy or financial results, but we cannot provide assurance that they will not have a material impact in the future. See the section entitled “Risk Factors” included elsewhere in this Annual Report for further information. We continuously work to enhance our cybersecurity risk management program.

Item 2. Properties.

As of December 31, 2023, we had approximately 350,000 square feet of leased office space. Our corporate headquarters is located in Boston, Massachusetts and consists of approximately 125,000 square feet under a lease that expires in 2029, subject to our option to extend the term for two successive terms of five years each, or our right to early termination. Our lease and our rights under this lease are subordinated under a lien of mortgage. In addition to our corporate headquarters, we lease properties in several other cities in the United States, as well as in Ireland, Bulgaria, Ukraine, Israel and the United Kingdom. We use our corporate headquarters and our other facilities primarily for our management, technology, product design, sales and marketing, finance, legal, human resources, general administrative and information technology teams.

We believe that our current facilities are adequate to meet our needs for the immediate future and that suitable additional space will be available to accommodate any expansion of our operations as needed.

Item 3. Legal Proceedings.

We are involved in a number of legal proceedings (including those described below) concerning matters arising in connection with the conduct of our business activities. These proceedings are at varying stages, and many of these proceedings seek an indeterminate amount of damages. We regularly evaluate the status of the legal proceedings in which we are involved to assess whether a loss is probable or there is a reasonable possibility that a loss or an additional loss may have been incurred and to determine if accruals are appropriate. If accruals are not appropriate, we further evaluate each legal proceeding to assess whether an estimate of the possible loss or range of possible loss can be made.

For certain cases described on the following pages, management is unable to provide a meaningful estimate of the possible loss or range of possible loss because, among other reasons, (i) the proceedings are in various stages; (ii) damages have not been sought; (iii) damages are unsupported and/or exaggerated; (iv) there is uncertainty as to the outcome of pending appeals or motions; (v) there are significant factual issues to be resolved; and/or (vi) there are novel legal issues or unsettled legal theories to be presented or a large number of parties involved. For these cases, however, management does not believe, based on currently available information, that the outcomes of these proceedings will have a material adverse effect on our financial condition, though the outcomes could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Attorney General of Texas

On January 19, 2016, the Texas Attorney General issued an opinion letter that “odds are favorable that a court would conclude that participation in paid daily fantasy sports leagues constitutes illegal gambling” under Texas law. In response to the opinion letter, we sued the Texas Attorney General on March 4, 2016 in Dallas County, Texas.

The lawsuit makes five claims: (1) a claim for a declaratory judgment that daily fantasy sports contests do not violate Texas law; (2) a claim of denial of due process under the Fifth and Fourteenth Amendments to the U.S. Constitution; (3) a claim of denial of due course of law under Article I of the Texas Constitution; (4) a claim of denial of equal protection under the Fourteenth Amendment to the U.S. Constitution; and (5) a claim of denial of equal rights under Article I of the Texas Constitution. We are also seeking reimbursement of our costs and attorneys’ fees.

On May 2, 2016, the Texas Attorney General filed a motion to transfer venue to Travis County, Texas. On April 16, 2018, the parties filed a notice of agreed non-suit without prejudice, and we re-filed our lawsuit against the Texas Attorney General in Travis County. On April 17, 2018, the Dallas County court granted the parties’ agreed non-suit without prejudice, thereby dismissing the Dallas County lawsuit without prejudice.

On May 24, 2018, the Texas Attorney General answered the complaint filed in Travis County, Texas.

FanDuel filed a petition in intervention on August 24, 2018, seeking essentially the same relief as the Company seeks. The Court entered an updated scheduling order setting the case for a non-jury trial on April 20, 2021. The parties subsequently filed an agreed motion to extend the scheduling order seeking, among other things, to change the non-jury trial date to January 27, 2025.

We intend to vigorously pursue our claims. In the event a court ultimately determines that daily fantasy sports contests violate Texas law, that determination could cause financial harm to us and loss of business in Texas.

We cannot predict with any degree of certainty the outcome of these matters or determine the extent of any potential liabilities.

We do not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on our financial condition, although the outcome could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Interactive Games LLC

On June 14, 2019, Interactive Games LLC (“IG”) filed suit against us in the U.S. District Court for the District of Delaware. In the Complaint, IG alleges that our DFS product offering infringes two patents: U.S. Patent No. 8,956,231 (the “’231 Patent”), which is entitled “Multi-process communication regarding gaming information”, and U.S. Patent No. 8,974,302 (the “’302 Patent”), which is entitled “Multi-process communication regarding gaming information.” That same Complaint alleges that our Sportsbook product offering infringes two additional patents: U.S. Patent No. 8,616,967 (the “’967 Patent”), which is entitled “System and method for convenience gaming” and U.S. Patent No. 9,430,901 (the “’901 Patent”), which is entitled “System and method for wireless gaming with location determination.” All four of these patents are collectively referred to as the “IG Patents.”

In response to the complaint, we filed a motion to dismiss the complaint under 35 U.S.C. Section 101, asserting the IG Patents are directed to non-patentable subject matter. The Court has not yet ruled on that motion, as the judge previously stayed the District Court litigation pending resolution of the inter partes reviews and dismissed the motion to dismiss (without ruling on the merits), but granted leave to refile such motion with updated briefing if the stay is lifted.

On June 17, 2020, we filed petitions for inter partes review with the Patent Trial and Appeal Board (the “PTAB”) challenging the validity of each of the IG Patents. The PTAB instituted review for the ’901 Patent, the ’231 Patent, and the ’967 Patent but denied institution for the ’302 Patent. On February 5, 2021, we filed a request for rehearing regarding the decision on the ’302 Patent, which was denied by the PTAB on March 2, 2021. On October 13, 2021, the PTAB heard oral argument on the ’901 Patent, the ’231 Patent, and the ’967 Patent. On January 4, 2022, the PTAB issued a final written decision finding all challenged claims of the ’901 Patent, the ’231 Patent, and the ’967 Patent unpatentable. On March 8, 2022, IG appealed the final written decisions for all three instituted inter partes reviews. On April 19, 2022, IG moved to voluntarily dismiss the appeal for the inter partes review related to the ’901 Patent, which was granted on April 20, 2022. On July 15, 2022, IG filed its opening briefs in the appeals of the inter partes reviews for the ’231 Patent and ’967 Patent. On October 5, 2022, we filed our responsive briefs in the appeals of the IPRs related to the ’231 Patent and ’967 Patent. On November 23, 2022, IG filed its reply briefs in the appeals of the IPRs related to the ’231 Patent and ’967 Patent. Oral argument for both appeals was held on June 7, 2023. On June 9, 2023, the Federal Circuit affirmed the PTAB’s decisions for the IPRs related to both the ’231 Patent and ’967 Patent.

The ’302 Patent is currently subject to an ex parte reexamination proceeding at the U.S. Patent and Trademark Office (U.S. Patent Application No. 90/015,151) (the “’302 Reexam”). On October 31, 2023, a final office action was issued in the ’302 Reexam, rejecting and objecting to certain claims in the ’302 Patent.

The District Court litigation remains stayed pending resolution of both: (1) all appeals from the inter partes reviews, and (2) the ’302 Reexam and any subsequent appeals therefrom.

We intend to vigorously defend this case. In the event that a court ultimately determines that we are infringing the asserted patents, we may be subject to substantial damages, which may include treble damages and/or an injunction that could require us to modify certain features that we currently offer.

We cannot predict with any degree of certainty the outcome of this matter or determine the extent of any potential liabilities. We also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company’s operations and cash flows.

Despite the potential for significant damages, we do not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on our financial condition, although the outcome could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Winview Inc.

On July 7, 2021, Winview Inc., a Delaware corporation (“Winview”) filed suit against the Company in the U.S. District Court for the District of New Jersey. In the complaint, Winview alleges that the Company infringes two patents: U.S. Patent No. 9,878,243 (“the ’243 Patent”), entitled “Methodology for Equalizing Systemic Latencies in Television Reception in Connection with Games of Skill Played in Connection with Live Television Programming”, and U.S. Patent No. 10,721,543 (“the ’543 Patent”), entitled “Method of and System for Managing Client Resources and Assets for Activities on Computing Devices”. The allegations based on the ’243 Patent are directed to Sportsbook, and the allegations based on the ’543 Patent are directed to both Sportsbook and DFS.

On July 28, 2021, Winview filed an amended complaint, in which it alleges that the Company infringes two additional patents: U.S. Patent No. 9,993,730 (“the ’730 Patent”), entitled “Methodology for Equalizing Systemic Latencies in Television Reception in Connection with Games of Skill Played in Connection with Live Television Programming”, and U.S. Patent No. 10,806,988 (“the ’988 Patent”), entitled “Method Of and System For Conducting Multiple Contests of Skill with a Single Performance”. The allegations based on the ’730 Patent are directed at Sportsbook, and the allegations based on the ’988 Patent are directed at DFS.

On October 4, 2021, we filed a motion to dismiss Winview’s direct infringement claims for the ’543 Patent and the ’730 Patent, as well as its claims for willful, induced, and contributory infringement for all four asserted patents. On October 29, 2021, the parties filed a stipulation that allowed Winview to file a second amended complaint on or before November 15, 2021, which the court signed and ordered on November 1, 2021.

On November 15, 2021, Winview filed a second amended complaint (the “SAC”), adding as defendants DK Crown Holdings Inc. and Crown Gaming Inc., a Delaware corporation, which are wholly-owned subsidiaries of the Company. The SAC, among other allegations, repeats the allegations of the first amended complaint that the defendants infringe the ’243 Patent, the ’543 Patent, the ’730 Patent, and the ’988 Patent. On December 15, 2021, the Company filed its motion to dismiss the SAC, again arguing that Winview failed to state a claim for direct infringement of the ’543 Patent and the ’730 Patent, and for willful, induced, and contributory infringement for all four asserted patents. Winview filed its memorandum in opposition to the motion to dismiss on January 24, 2022, and the Company filed its reply brief to Winview’s opposition on January 31, 2022.

On August 3, 2022, we filed a petition for inter partes review with the PTAB challenging the validity of the ’243 Patent. On September 20, 2022, the court entered an order staying the pending motion to dismiss and staying all discovery pending final resolution of the petition for inter partes review through a final written decision. On January 31, 2023, the PTAB granted institution of the inter partes review, and it is expected to issue a final written decision by January 31, 2024. On February 15, 2023, the District Court administratively terminated the lawsuit pending the PTAB’s final written decision. On January 29, 2024, the PTAB issued final written decisions in the IPRs, finding unpatentable all challenged claims of the ’243, ’543, and ’730 Patents.

We intend to vigorously defend this case. In the event that a court ultimately determines that we are infringing the asserted patents, we may be subject to substantial damages, which may include treble damages and/or an injunction that could require us to modify certain features that we currently offer.

We cannot predict with any degree of certainty the outcome of this matter or determine the extent of any potential liabilities. We also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company’s operations and cash flows.

Despite the potential for significant damages, we do not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on our financial condition, although the outcome could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Securities Matters Arising From the Hindenburg Report and Related Matters

Beginning on July 9, 2021, the Company received subpoenas from the SEC seeking documents concerning, among other things, certain of the allegations concerning SBTech that were contained in a report published about the Company on June 15, 2021 by Hindenburg Research, as well as the Company’s adherence to and disclosures regarding its compliance policies and procedures, and related matters. The Company intends to comply with the related requests and is cooperating with the SEC’s ongoing inquiry.

We cannot predict with any degree of certainty the outcome of the SEC matter or determine the extent of any potential liabilities. We also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in the SEC matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, we do not believe, based on currently available information, that the outcome of the SEC matter will have a material adverse effect on our financial condition, although the outcome could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Matters Related to the GNOG Transaction

On August 12, 2022, a putative class action was filed in Nevada state District Court in Clark County against Golden Nugget Online Gaming, Inc. ("GNOG Inc."), the Company and one of its officers and two affiliates, as well as former officers or directors and the former controlling stockholder of GNOG Inc. and Jefferies LLC. The lawsuit asserts claims on behalf of a putative class of former minority stockholders of GNOG Inc. alleging that certain former officers and directors of GNOG Inc. and its former controlling stockholder (Tilman Fertitta and/or Fertitta Entertainment, Inc.) breached their fiduciary duties to minority stockholders of GNOG Inc. in connection with the GNOG Transaction, and the other defendants aided and abetted the alleged breaches of fiduciary duty. On November 1, 2022, defendants filed motions to dismiss the action on the procedural grounds of improper forum and lack of personal jurisdiction over certain defendants or, in the alternative, to stay the action pending resolution of parallel proceedings in the Delaware Court of Chancery. On May 24, 2023, the court (i) granted the motions to dismiss for improper forum with respect to GNOG Inc. and its former officers and directors other than Mr. Fertitta, as well as Jefferies LLC, (ii) denied the motions to dismiss for improper forum with respect to the Company and its officer and two affiliates, as well as Mr. Fertitta and Fertitta Entertainment, Inc., and (iii) granted the non-dismissed defendants' alternative request to stay the action for at least nine months pending resolution of parallel proceedings in the Delaware Court of Chancery. On June 29, 2023, the plaintiff filed a motion for reconsideration of the court's order insofar as it found certain claims subject to a Delaware forum requirement. On July 27, 2023, defendants filed oppositions to the plaintiff's motion for reconsideration, and certain defendants filed countermotions for certification of final judgment as to the claims that the court previously dismissed pursuant to its May 24, 2023 order. On October 1, 2023, the court entered an order (1) denying the motion for reconsideration and (2) granting the motion for certification of final judgment as to the defendants whose claims against them previously were dismissed. On January 18, 2024, the court entered a stipulated order extending the stay until resolution of the parallel proceedings in Delaware Chancery Court.

On September 9, 2022, two similar putative class actions were filed in the Delaware Court of Chancery against former directors of GNOG Inc. and its former controlling stockholder, one of which also names the Company and Jefferies Financial Group, Inc. as defendants. These pending actions in Delaware assert substantially similar claims on behalf of a putative class of former minority stockholders of GNOG Inc. alleging that certain former officers and directors of GNOG Inc. and its former controlling stockholder (Tilman Fertitta) breached their fiduciary duties to minority stockholders of GNOG Inc. in connection with the GNOG Transaction, and one of the actions also alleges that the Company and Jefferies Financial Group, Inc. aided and abetted the alleged breaches of fiduciary duty. On October 12, 2022, the Delaware Court of Chancery consolidated these two actions under the caption *In re Golden Nugget Online Gaming, Inc. Stockholders Litigation*. On October 29, 2022, the court appointed co-lead plaintiffs in the consolidated action. On November 3, 2022, co-lead plaintiffs designated an operative complaint in the consolidated action. On January 13, 2023, defendants filed a motion seeking dismissal of the action. On June 8, 2023, the court denied defendants' motion to dismiss. At a mediation held on January 24, 2024, the parties reached an agreement in principle to settle the Delaware action, subject to negotiation and execution of mutually agreeable definitive documentation and the performance and satisfaction of the terms and conditions set forth thereof.

The Company intends to vigorously defend against the Nevada action. The Company cannot predict with any degree of certainty the outcome the Nevada action or determine the extent of any potential liabilities. The Company also cannot provide an estimate of the possible loss or range of loss of the Nevada action. Any adverse outcome in the Nevada action could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of the Nevada action will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

AG 18, LLC d/b/a/ Arrow Gaming

On August 19, 2021, AG 18, LLC d/b/a/ Arrow Gaming (“Arrow Gaming”) filed a complaint against the Company in the United States District Court for the District of New Jersey alleging that the Company’s DFS and Casino product offerings infringe four patents. On October 12, 2021, Arrow Gaming filed an amended complaint to add one additional patent. The following U.S. Patents are asserted against one or both of the Company’s DFS and Casino product offerings in the amended complaint: (1) U.S. Patent No. 9,613,498, entitled “Systems and Methods For Peer-to-Peer Gaming”; (2) U.S. Patent No. 9,978,205, entitled “Location Based Restrictions on Networked Gaming”; (3) U.S. Patent No. 10,497,220 entitled “Location Based Restrictions on Networked Gaming”; (4) U.S. Patent No. 10,614,657 entitled “Location Based Restrictions on Networked Gaming”; and (5) U.S. Patent No. 11,024,131 entitled “Location Based Restrictions on Networked Gaming” (collectively, the “Arrow Gaming Patents”).

On November 9, 2021, we filed a motion to dismiss plaintiff’s complaint. On November 10, 2021, we answered the complaint and filed counterclaims (the “Counterclaims”). In the Counterclaims we seek, among other things, a declaratory judgment that the Arrow Gaming Patents are invalid. On December 1, 2021, Arrow Gaming answered our Counterclaims. On December 20, 2021, Arrow Gaming filed a second amended complaint adding new allegations with respect to the alleged willful infringement.

On January 21, 2022, the Company filed a motion to dismiss plaintiff’s second amended complaint. On February 22, 2022, plaintiff filed its opposition to the Company’s motion to dismiss plaintiff’s second amended complaint, and on March 25, 2022, the Company filed its reply thereto. On March 7, 2022, the Company filed a motion to disqualify plaintiff’s counsel. On March 21, 2022, plaintiff filed its opposition to the Company’s motion to disqualify plaintiff’s counsel, and on March 28, 2022, the Company filed its reply thereto. On September 21, 2022, the Company’s motion to dismiss was administratively terminated, pending the outcome of the disqualification motion. On October 4, 2022, the presiding Magistrate Judge denied the Company’s motion to disqualify plaintiff’s counsel. On October 21, 2022, the Company filed a renewed motion to dismiss plaintiff’s complaint. On November 4, 2022, Arrow Gaming filed an opposition to the renewed motion to dismiss. On November 14, 2022, the Company filed its reply in support of the motion to dismiss. On November 4, 2022, the Company filed a motion to stay the case pending resolution of the below-referenced petitions for inter partes review. On November 23, 2022 Arrow Gaming filed an opposition to the motion to stay. On December 2, 2022, the Company filed a reply in support of the motion to stay.

Between August 22, 2022 and August 30, 2022, the Company filed petitions for inter partes review with the PTAB challenging the validity of each of the Arrow Gaming Patents. On March 14, 2023, the PTAB granted institution of all inter partes review petitions, and it is expected to issue final written decisions by March 14, 2024. On June 7, 2023, Arrow Gaming filed its responses to the petitions. On September 6, 2023, DraftKings filed its replies in support of the petitions. Oral argument occurred on December 13, 2023 and we are awaiting the final decision.

On April 3, 2023, the District Court administratively terminated the lawsuit pending the PTAB’s final written decisions.

We intend to vigorously defend this case. In the event that a court ultimately determines that we are infringing the asserted patents, we may be subject to substantial damages, which may include treble damages and/or an injunction that could require us to modify certain features that we currently offer.

We cannot predict with any degree of certainty the outcome of this matter or determine the extent of any potential liabilities. We also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company’s operations and cash flows.

Despite the potential for significant damages, we do not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on our financial condition, although the outcome could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Beteiro, LLC

On November 22, 2021, Beteiro, LLC (“Beteiro”) filed a complaint against the Company in the United States District Court for the District of New Jersey alleging that the Company’s Sportsbook and Casino product offerings infringe four patents. The following U.S. Patents are asserted against the Company’s Sportsbook and Casino products in the complaint: U.S. Patent No. 9,965,920, entitled “Apparatus and Method for Facilitating Gaming Activity and/or Gambling Activity”; U.S. Patent No. 10,043,341, entitled “Apparatus and Method for Facilitating Gaming Activity and/or Gambling Activity”; U.S. Patent No.

10,147,266, entitled “Apparatus and Method for Facilitating Gaming Activity and/or Gambling Activity”; and U.S. Patent No. 10,255,755, entitled “Apparatus and Method for Facilitating Gaming Activity and/or Gambling Activity” (collectively, the “Beteiro Patents”).

The Company filed its motion to dismiss plaintiff’s complaint on February 9, 2022. On April 7, 2022, Plaintiff filed its opposition to the Company’s motion to dismiss, and on April 25, 2022, the Company filed its reply thereto. On September 7, 2022, the Company’s motion to dismiss the complaint was granted. On September 22, 2022, Beteiro filed its notice to appeal the ruling on the motion to dismiss. On October 5, 2022, Beteiro filed a motion for reconsideration of the ruling on the motion to dismiss at the District Court, which was denied by the District Court on November 2, 2022. On March 9, 2023, Beteiro filed its opening appellate brief. DraftKings’ responsive brief was filed on June 9, 2023. Beteiro’s reply brief was filed on July 1, 2023.

On October 28, 2022, the Company filed petitions for inter partes review with the PTAB challenging the validity of each of the Beteiro Patents. Between May 11, 2023 and May 12, 2023, the PTAB instituted review for all Beteiro Patents. The PTAB is expected to issue a final written decision for the IPRs by May 12, 2024.

We intend to vigorously defend this case. In the event that a court ultimately determines that we are infringing the asserted patents, we may be subject to substantial damages, which may include treble damages and/or an injunction that could require us to modify certain features that we currently offer.

We cannot predict with any degree of certainty the outcome of this matter or determine the extent of any potential liabilities. We also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company’s operations and cash flows.

Despite the potential for significant damages, we do not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on our financial condition, although the outcome could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Diogenes Ltd. & Colossus (IOM) Ltd.

On December 1, 2021, Diogenes Ltd. & Colossus (IOM) Ltd. (“Colossus”), filed a complaint against the Company in the United States District Court for the District of Delaware alleging that the Company’s Sportsbook product offering infringes seven of its patents. The following U.S. Patents, each entitled “Wagering apparatus, methods and systems”, are asserted against the Company’s Sportsbook product offering in the complaint: U.S. Patent No. 8,721,439 (“the ‘439 patent”); U.S. Patent No. 9,117,341 (“the ‘341 patent”); U.S. Patent No. 9,275,516 (“the ‘516 patent”); U.S. Patent No. 9,424,716 (“the ‘716 patent”); U.S. Patent No. 9,704,338 (“the ‘338 patent”); U.S. Patent No. 10,970,969 (“the ‘969 patent”); and U.S. Patent No. 10,997,822 (“the ‘822 patent”).

On January 24, 2022, the Company filed its motion to dismiss the original complaint. On February 7, 2022, Colossus filed an amended complaint (the “Amended Complaint”) to, among other things, assert one additional patent against the Company, U.S. Patent No. 11,200,779 (“the ‘779 patent”). The patents asserted by Colossus are collectively referred to as the “Colossus Patents.”

The Company filed its motion to dismiss the Amended Complaint on February 22, 2022. On March 15, 2022, plaintiffs filed their opposition to the Company’s motion to dismiss, and on March 29, 2022, the Company’s filed its reply thereto. On March 25, 2022, a scheduling order was entered in which, among other things, trial was scheduled for January 13, 2025. On July 18, 2022, Magistrate Judge Burke issued a report and recommendation (the “Report and Recommendation”) that the motion to dismiss be granted-in-part and denied-in-part. The Company and Colossus each filed their objections to the Report and Recommendation on August 1, 2022. On August 26, 2022, District Court Judge Noreika overruled both parties’ respective objections and adopted the Report and Recommendation of Magistrate Judge Burke regarding the motion to dismiss. On December 27, 2022, the Company filed an Answer to the Amended Complaint, including certain affirmative defenses. On January 17, 2023, Colossus filed a motion to strike the affirmative defense of unenforceability from the Company’s Answer. On February 7, 2023, the Company filed an Amended Answer and Counterclaims to the Amended Complaint, and also filed a response to Colossus’ motion to strike. On February 28, 2023, Colossus filed another motion to strike DraftKings’ inequitable conduct affirmative defense and counterclaim. DraftKings filed its responsive brief on March 28, 2023. Colossus filed its reply brief on April 11, 2023. Magistrate Judge Burke held a hearing on Colossus’ motion on June 6, 2023 and subsequently issued a report and recommendation (the “Second Report and Recommendation”) that the motion be denied in part and granted in part.

Colossus filed objections to the Second Report and Recommendation on June 21, 2023, and DraftKings filed its response to Colossus' objections on July 5, 2023. On August 2, 2023, Judge Noreika overruled Colossus' objections and adopted the Second Report and Recommendation.

Between November 29, 2022, and February 7, 2023, the Company filed petitions for inter partes review with the PTAB challenging the validity of the Colossus Patents. With respect to the seven patents remaining pending in the case, the PTAB granted institution of IPRs for each of the '341 patent, '969 patent, and the '822 patent. The PTAB is expected to issue final written decisions for these three IPRs by June 22, 2024. The PTAB denied institution of IPR for each of the '516 patent, '716 patent, '338 patent and the '779 patent. On September 11, 2023, the Company filed a request for Director review of the PTAB's decision not to institute review in the IPR for the '779 patent. On November 7, 2023, the Director of the U.S. Patent and Trademark Office delegated Director Review of the PTAB's institution decision in the IPR for the '779 Patent to the Delegated Review Panel to determine whether to grant rehearing.

On September 6, 2023, the parties stipulated to a stay of the district court litigation pending resolution of the instituted IPRs. The PTAB review of the '341, '969 and '822 patents are ongoing at this time.

We intend to vigorously defend this case. In the event that a court ultimately determines that we are infringing the asserted patents, we may be subject to substantial damages, which may include treble damages and/or an injunction that could require us to modify certain features that we currently offer.

We cannot predict with any degree of certainty the outcome of this matter or determine the extent of any potential liabilities. We also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, we do not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on our financial condition, although the outcome could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Steiner

Nelson Steiner filed suit against the Company and FanDuel Inc. in Florida state court on November 9, 2015. The action was subsequently transferred to In Re: Daily Fantasy Sports Litigation (Multi-District Litigation) (the "MDL"), and Mr. Steiner's action was consolidated into the MDL's amended complaint, which, in February 2016, consolidated numerous actions (primarily purported class actions) filed against the Company, FanDuel, and other related parties in courts across the United States. By June 23, 2022, the MDL was resolved, except for Mr. Steiner's action, and the court officially closed the MDL docket on July 8, 2022.

Mr. Steiner brings this action as a concerned citizen of the state of Florida alleging that, among other things, defendants' daily fantasy sports contests are illegal gambling under the state laws of Florida and seeks disgorgement of "gambling losses" purportedly suffered by Florida citizens on behalf of the state. On June 23, 2022, the MDL court remanded Mr. Steiner's action to the Circuit Court for Pinellas County, Florida. Plaintiff has not yet filed an amended pleading.

The Company intends to vigorously defend this suit. Any adverse outcome in this matter could subject the Company to substantial damages and it could be restricted from offering DFS contests in Florida. The Company cannot provide any assurance as to the outcome of this matter.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this matter will have a material adverse effect on Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Turley

On January 9, 2023, Simpson G. Turley, individually and on behalf of all others similarly situated, filed a purported class action against the Company in the United States District Court for the District of Massachusetts. Plaintiff alleges, among other things, that he was a contestant in the Company's daily fantasy showdown contest for the January 2, 2023, NFL game between the Cincinnati Bengals and the Buffalo Bills (the "Bengals-Bills Game"). The Bengals-Bills Game was postponed and eventually cancelled due to Damar Hamlin collapsing during the game. Plaintiff alleges that he was winning prizes in multiple showdown contests at the point in time that the Bengals-Bills Game was cancelled (with 5:58 remaining in the first quarter). Plaintiff alleges that, instead of paying out the prize money, the Company refunded entry fees to contestants that entered showdown or flash draft fantasy contests. On May 8, 2023, plaintiff Turley and a new plaintiff (Erik Ramos) filed a First Amended Class Action Complaint. On June 12, 2023, DraftKings filed a motion to dismiss the claims asserted by both plaintiffs or, in the alternative, strike the flash draft allegations. Plaintiffs filed an opposition on July 17, 2023. On August 3, 2023, Defendant filed its reply, and the motion remains pending. The plaintiffs assert claims for breach of contract, unfair and deceptive acts and practices, false advertising, and unjust enrichment. Among other things, plaintiffs seek statutory damages, monetary damages, punitive damages, attorney fees and interest.

The Company intends to vigorously defend this case. Any adverse outcome in this matter could subject the Company to substantial damages and /or require alterations to the Company's business. The Company cannot provide any assurance as to the outcome of this matter.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this matter will have a material adverse effect on Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Securities Matters Related to DraftKings Marketplace

On March 9, 2023, a putative class action was filed in Massachusetts federal court by an alleged purchaser of non-fungible tokens ("NFTs") on the DraftKings Marketplace ("DK Marketplace"). The complaint asserts claims for violations of federal and state securities laws against the Company and three of its officers on the grounds that, among other things, the NFTs that are sold and traded on the DK Marketplace allegedly constitute securities that were not registered with the SEC in accordance with federal and Massachusetts law, and that the DK Marketplace is a securities exchange that is not registered in accordance with federal and Massachusetts law. Based on these allegations, the plaintiff brings claims seeking rescissory damages and other relief on behalf of himself and a putative class of persons who purchased NFTs on the DK Marketplace between August 11, 2021 and the present. On June 27, 2023, the court entered an order authorizing the plaintiff to file an amended complaint by August 4, 2023. On September 25, 2023, defendants filed a motion seeking dismissal of this action. On November 10, 2023, plaintiff filed an opposition to the motion to dismiss. On December 11, 2023, defendants filed a reply memorandum in support of the motion to dismiss. The Court heard oral argument on the motion to dismiss on December 19, 2023, and took the matter under advisement. We intend to vigorously defend this case.

On July 17, 2023, the Company received a subpoena from the Securities Division of the Office of the Secretary of the Commonwealth of Massachusetts seeking documents and requesting answers to interrogatories concerning, among other things, DK Marketplace and NFTs that are sold on DK Marketplace, and related matters. We intend to comply with these requests.

Any adverse outcome in these matters could subject the Company to substantial damages and/or require alterations to the Company's business. The Company cannot provide any assurance as to the outcome of these matters.

The Company cannot predict with any degree of certainty the outcome of these matters or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages, penalties and/or require alterations to the Company's that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of these matters will have a material adverse effect on Company's financial condition, although the outcome could

be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Shareholder Derivative Litigation Related to DraftKings Marketplace

On May 31, 2023, a putative shareholder derivative action was filed in Nevada state court by an alleged shareholder of the Company. The action asserts claims on behalf of the Company against certain senior officers and members of the Board of Directors of the Company for breach of fiduciary duty and unjust enrichment based primarily on allegations that the defendants caused or allowed the Company to disseminate misleading and inaccurate information to its shareholders in connection with NFTs that are sold and traded on the DK Marketplace. The action also alleges that certain individuals are liable for trading in Company stock at artificially inflated prices. The action seeks unspecified compensatory damages, changes to corporate governance and internal procedures, restitution, disgorgement, costs and attorney's fees, and other unspecified relief. All proceedings in this action have been stayed by agreement of the parties pending resolution of the above-referenced motion to dismiss in the putative class action in Massachusetts federal court.

The Company cannot predict with any degree of certainty the outcome of this matter or determine the extent of any potential liabilities. The Company also cannot provide an estimate of the possible loss or range of loss. Because this action alleges claims on behalf of the Company and purports to seek a judgment in favor of the Company, the Company does not believe, based on currently available information, that the outcome of the proceedings will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Scanlon

On December 8, 2023, plaintiffs Melissa Scanlon and Shane Harris, individually and on behalf of others similarly situated, filed a purported Massachusetts class action lawsuit against DraftKings in Middlesex County Superior Court of Massachusetts. Among other things, Plaintiffs allege that the Company's promotion that offered new customers an opportunity to earn up to 1,000 in site credits, and related advertisements, were: (1) unfair or deceptive practices in violation of Massachusetts General Laws ("M.G.L.") c. 93A, §§ 2, 9; and (2) untrue and misleading advertising in violation of M.G.L. c. 266, § 91. The Plaintiffs are seeking, among other things, injunctive relief, actual damages, double or treble damages, and attorneys' fees.

The Company intends to vigorously defend this case. Any adverse outcome in this matter could subject the Company to substantial damages and /or require alterations to the Company's business. The Company cannot provide any assurance as to the outcome of this matter.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this matter will have a material adverse effect on Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Other

In addition to the above actions, we are subject to various other legal proceedings and claims that arise in the ordinary course of business. In our opinion, the amount of ultimate liability with respect to any of these actions is unlikely to materially affect our financial condition, results of operations or liquidity, though the outcomes could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.**Market Information**

DraftKings' Class A common stock trades on The Nasdaq Stock Market under the symbol "DKNG". Prior to April 24, 2020 and before the completion of the business combination with SBTech (Global) Limited and Diamond Eagle Acquisition Corp, the Class A common stock of Diamond Eagle Acquisition Corp traded on The Nasdaq Stock Market under the ticker symbol "DEAC".

Holders

As of February 13, 2024, there were 878 holders of record of our Class A common stock. In addition to holders of record of our Class A common stock, we believe there is a substantially greater number of "street name" holders or beneficial holders whose Class A common stock is held of record by banks, brokers and other financial institutions.

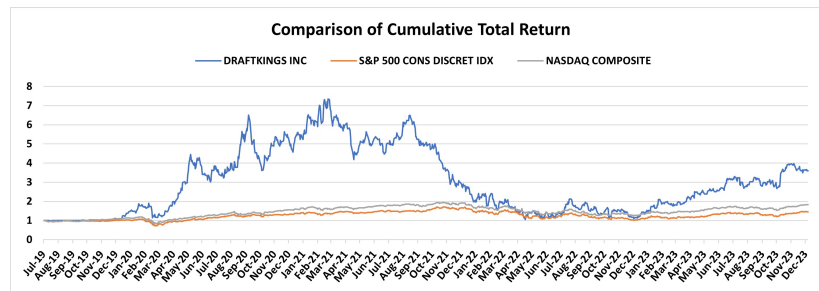
There is no public market for our Class B common stock and one holder of record of our Class B common stock as of February 13, 2024.

Dividend Policy

We have not paid any cash dividends on our Class A common stock to date. The payment of cash dividends is subject to the discretion of our board of directors and may be affected by various factors, including our future earnings, financial condition, capital requirements, share repurchase activity, current and future planned strategic growth initiatives, levels of indebtedness, and other considerations our board of directors deem relevant.

Securities Authorized for Issuance under Equity Compensation Plans

See Part III, Item 12 of this Annual Report for information about our equity compensation plans, which is incorporated by reference herein.

Stock Price Performance

The graph above compares the cumulative total stockholder return on our Class A common stock with the cumulative total return on the Standard & Poor's ("S&P") 500 Consumer Discretionary Index and the Nasdaq Composite Index. The graph assumes an initial investment of \$100 in our Class A common stock at the market close on July 25, 2019, which was our initial trading day. Data for the S&P 500 Consumer Discretionary Index and the Nasdaq Composite Index assume reinvestment of dividends. Total return equals stock price appreciation plus reinvestment of dividends.

Recent Sales of Unregistered Securities; Use of Proceeds from Registered Offerings

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None, other than the shares repurchased pursuant to net settlement by employees in satisfaction of income tax withholding obligations incurred through the vesting of stock awards.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis should be read in conjunction with other sections of this Annual Report, including "Item 1. Business" and the accompanying consolidated financial statements and related notes included elsewhere in this Annual Report.

On May 5, 2022 (the "GNOG Closing Date"), DraftKings Inc. consummated its acquisition of Golden Nugget Online Gaming, Inc. (together with its subsidiaries unless the context requires otherwise, "GNOG"), pursuant to a definitive agreement and plan of merger, dated August 9, 2021 (the "GNOG Merger Agreement"), in an all-stock transaction (the "GNOG Transaction"). DraftKings' consolidated financial statements exclude GNOG's operations prior to the GNOG Closing Date, unless indicated otherwise. In connection with the GNOG Transaction, DraftKings Inc. became the going-forward public company and the direct parent company of both DraftKings Holdings Inc. (formerly DraftKings Inc.), a Nevada corporation ("Old DraftKings"), and GNOG, and DraftKings Inc. is the registrant filing this Annual Report as the successor registrant for Old DraftKings. Unless otherwise indicated, the terms "DraftKings," the "Company," "we," "us," or "our" refer to DraftKings Inc. (or, in respect of periods prior to the GNOG Closing Date, Old DraftKings), together with its consolidated subsidiaries.

Our Business

We are a digital sports entertainment and gaming company. We provide users with online sports betting ("Sportsbook"), online casino ("iGaming") and daily fantasy sports ("DFS") product offerings, as well as retail sportsbook, media and other consumer product offerings. We are also involved in the design and development of sports betting and casino gaming software for online and retail sportsbooks and iGaming operators. On May 5, 2022, we acquired GNOG in an all-stock transaction to enable us to leverage Golden Nugget's established brand to broaden our reach into new customer segments and enhance the combined company's iGaming product offering through our vertically-integrated technology stack and GNOG's unique capabilities, including live dealer.

Our mission is to make life more exciting by responsibly creating the world's favorite real-money games and betting experiences. We accomplish this by creating an environment where our users can find enjoyment and fulfillment through Sportsbook, iGaming and DFS, as well as media and other online consumer product offerings. We are also highly focused on our responsibility as a steward of this new era in real-money gaming. Our ethics guide our decision making, with respect to both the tradition and integrity of sports and our investments in regulatory compliance and consumer protection.

We continue to make deliberate and substantial investments in support of our mission and long-term growth. For example, we have invested in our products and technology in order to continuously launch new product innovations; improve marketing, merchandising, and operational efficiency through data science; and deliver a great user experience. We also make significant investments in sales and marketing and incentives to grow and retain our paid user base, including personalized cross-product offers and promotions, and promote brand awareness to attract the "skin-in-the-game" sports fan. Together, these investments have enabled us to create a leading product built on scalable technology, while attracting a user base that has resulted in the rapid growth of our business.

Our priorities are to (a) continue to invest in our product offerings, (b) launch our product offerings in new jurisdictions, (c) create replicable and predictable state-level unit economics in Sportsbook and iGaming and (d) expand our other consumer product offerings. When we launch our Sportsbook and iGaming product offerings in a new jurisdiction, we invest heavily in user acquisition, retention and cross-selling until the new jurisdiction provides a critical mass of users engaged across our product offerings.

Our current technology is highly scalable with relatively minimal incremental spend required to launch our product offerings in new jurisdictions. We will continue to manage our fixed-cost base in conjunction with our market entry plans and focus our variable spend on marketing, user experience and support and regulatory compliance to become the product of choice for users and maintain favorable relationships with regulators. We also expect to improve our profitability on an annual basis over time as our revenue and gross profit expand as states mature, and our variable marketing expenses and fixed costs stabilize or grow at a slower rate.

Our path to profitability on an annual basis is based on the acceleration of positive contribution profit growth driven by increased revenue and gross profit generation from ongoing efficient customer acquisition enabled by the transition from local to regional to national advertising, strong customer retention, improved monetization from frequency and higher hold percentage, as well as scale benefits from investments in our product and technology and general and administrative functions. On a consolidated Adjusted EBITDA basis, we expect to achieve profitability on an annual basis when total contribution profit

exceeds the fixed costs of our business, which depends, in part, on the percentage of the U.S. adult population that has access to our product offerings and the other factors summarized in the section entitled “Cautionary Statement Regarding Forward-Looking Statements”.

Financial Highlights and Trends

The following table sets forth a summary of our financial results for the periods indicated and is derived from our consolidated financial statements for the years ended December 31, 2023, 2022, and 2021:

(amounts in thousands)	Year Ended December 31,		
	2023	2022	2021
Revenue	\$ 3,665,393	\$ 2,240,461	\$ 1,296,025
Net Loss	(802,142)	(1,377,987)	(1,523,195)
Adjusted EBITDA ⁽¹⁾	(151,035)	(721,781)	(676,133)

(1) Adjusted EBITDA is a non-GAAP financial measure. See “Non-GAAP Information” below for additional information about this measure and a reconciliation of this measure to the most directly comparable financial measure calculated in accordance with U.S. GAAP.

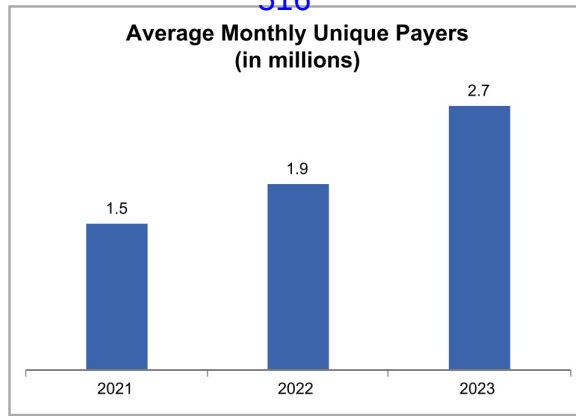
Revenue increased by \$1,424.9 million in 2023, compared to 2022, primarily due to the strong performance of our Sportsbook and iGaming product offerings as a result of robust customer acquisition and retention, the successful launches of those product offerings in additional jurisdictions, and improved promotional reinvestment for Sportsbook and iGaming.

Key Performance Indicators

Monthly Unique Payers (“MUPs”). We define MUPs as the number of unique paid users per month who had one or more real-money, paid engagements across one or more of our Sportsbook, iGaming, DFS, or other consumer product offerings via our technology. For reported periods longer than one month, we average the MUPs for the months in the reported period. Although the number of unique paid users includes those users that have participated in a real-money, paid engagement using only promotional incentives (which has not been a material number of users to date), which are fungible with other funds deposited into their wallets on our technology, it does not include users who have made a deposit but have not yet had a real-money, paid engagement.

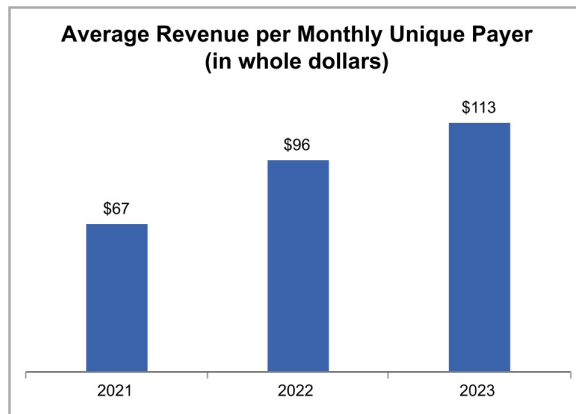
MUPs is a key indicator of the scale of our online gaming user base and awareness of our brand. We believe that year-over-year growth in MUPs is also generally indicative of the long-term revenue growth potential of our online gaming product offerings, although MUPs in individual periods may be less indicative of our longer-term expectations. We expect the number of MUPs to grow as we attract, retain and re-engage users in new and existing jurisdictions and expand our product offerings to appeal to a wider audience.

The chart below presents our average MUPs for 2021, 2022 and 2023:



Average Revenue per MUP ("ARPMUP"). We define and calculate ARPMUP as the average monthly revenue, excluding revenue from gaming software services, for a reporting period, divided by the average number of MUPs for the same period. ARPMUP is a key indicator of our ability to drive usage and monetization of our product offerings.

The chart below presents our ARPMUP for 2021, 2022 and 2023:



The increase in MUPs for 2023, compared to 2022, primarily reflects strong unique payer retention and acquisition across our Sportsbook and iGaming product offerings as well as the expansion of our Sportsbook and iGaming product offerings into new jurisdictions, partially offset by a decline in DFS MUPs.

ARPMUP increased in 2023 compared to 2022, primarily due to structural improvement in our Sportsbook hold rate and improved promotional reinvestment for Sportsbook and iGaming.

Non-GAAP Information

This Annual Report includes Adjusted EBITDA, which is a non-GAAP financial measure that we use to supplement our results presented in accordance with U.S. GAAP. We believe Adjusted EBITDA is useful in evaluating our operating performance, similar to measures reported by our publicly-listed U.S. competitors, and regularly used by security analysts, institutional investors and other interested parties in analyzing operating performance and prospects. Adjusted EBITDA is not intended to be a substitute for any U.S. GAAP financial measure. As calculated, it may not be comparable to other similarly titled measures of performance of other companies in other industries or within the same industry.

We define and calculate Adjusted EBITDA as net loss before the impact of interest income or expense (net), income tax provision or benefit, and depreciation and amortization, and further adjusted for the following items: stock-based compensation; transaction-related costs; litigation, settlement and related costs; advocacy and other related legal expenses; gain or loss on remeasurement of warrant liabilities; and other non-recurring and non-operating costs or income, as described in the reconciliation below.

We include non-GAAP financial measures because they are used by management to evaluate our core operating performance and trends and to make decisions regarding the allocation of capital and new investments. Adjusted EBITDA excludes certain expenses that are required in accordance with U.S. GAAP because they are non-recurring items (for example, in the case of transaction-related costs and advocacy and other related legal expenses), non-cash expenditures (for example, in the case of depreciation and amortization, remeasurement of warrant liabilities and stock-based compensation), or non-operating items which are not related to our underlying business performance (for example, in the case of interest income and expense and litigation, settlement and related costs).

Adjusted EBITDA

The table below presents our net loss, which is the most directly comparable financial measure calculated in accordance with U.S. GAAP, reconciled to Adjusted EBITDA for the periods indicated:

(amounts in thousands)	Year Ended December 31,		
	2023	2022	2021
Net Loss	\$ (802,142)	\$ (1,377,987)	\$ (1,523,195)
Adjusted for:			
Depreciation and amortization ⁽¹⁾	201,920	169,252	121,138
Interest (income) expense, net	(55,739)	(18,702)	(1,957)
Income tax (benefit) provision	10,170	(67,866)	8,269
Stock-based compensation ⁽²⁾	398,463	578,799	683,293
Transaction-related costs ⁽³⁾	3,060	17,315	25,316
Litigation, settlement, and related costs ⁽⁴⁾	34,500	7,010	10,392
Advocacy and other related legal expenses ⁽⁵⁾	—	16,558	40,415
Loss (gain) on remeasurement of warrant liabilities	57,543	(29,396)	(30,065)
Other non-recurring, special project and non-operating (income) costs ⁽⁶⁾	1,190	(16,764)	(9,739)
Adjusted EBITDA	\$ (151,035)	\$ (721,781)	\$ (676,133)

(1) The amounts include the amortization of acquired intangible assets of \$117.3 million, \$106.1 million, and \$80.1 million for 2023, 2022, and 2021, respectively.

(2) Reflects stock-based compensation expenses resulting from the issuance of awards under incentive plans.

(3) Includes capital markets advisory, consulting, accounting and legal expenses related to evaluation, negotiation and integration costs incurred in connection with pending or completed transactions and offerings, including costs relating to the GNOG Transaction in 2022 and 2021.

(4) Primarily includes external legal costs related to litigation and litigation settlement costs deemed unrelated to our core business operations.

- (5) Reflects non-recurring and non-ordinary course costs relating to advocacy efforts and other legal expenses in jurisdictions where we do not operate certain product offerings and are actively seeking licensure, or similar approval, for those product offerings. This adjustment excludes (i) costs relating to advocacy efforts and other legal expenses in jurisdictions where we do not operate that are incurred in the ordinary course of business and (ii) costs relating to advocacy efforts and other legal expenses incurred in jurisdictions where related legislation has been passed and we currently operate. For 2022, those costs primarily related to our support of Proposition 27 in California. For 2021, those costs primarily related to our support of Proposition 27 in California and our support of the sports betting ballot initiative in Florida.
- (6) Primarily includes the change in fair value of certain financial assets, as well as our equity method share of investee's losses and other costs relating to non-recurring and non-operating items.

Due to the timing of the consummation of the GNOG Transaction, the above periods, to the extent applicable, exclude GNOG's operations prior to the GNOG Closing Date of May 5, 2022.

Key Factors Affecting Our Results

Our financial position and results of operations depend to a significant extent on the following factors:

Industry Opportunity and Competitive Landscape

We operate within the global entertainment and gaming industries, which are comprised of diverse product offerings that compete for consumers' time and disposable income. Our short-to-medium term focus is on the North American regulated gaming industry, particularly the opportunity in online Sportsbook and iGaming. We believe our industry-leading product offerings, strong technology services, more than a decade of U.S. online and mobile gaming experience, established brand and vertically integrated solutions make us a partner of choice for state regulators, professional sports leagues and teams, gaming companies, and other sports entertainment and related businesses.

When we enter new jurisdictions, we face significant competition from other established competitors, some of which may have more experience in sports betting and iGaming and access to more resources. We believe our analytics and technology, and the lessons learned from our DFS operations and prior launches of our online Sportsbook and iGaming product offerings, will enable us to capture significant share in newly available jurisdictions.

In addition, our growth prospects may suffer if we are unable to develop successful product offerings or if we fail to pursue additional product offerings. Further, if we fail to make the right investment decisions in our product offerings, technology and services, we may not effectively attract and retain users and our revenue and results of operations may be negatively impacted.

Legalization, Regulation and Taxation

Our growth prospects depend on the legalization of online sports betting and iGaming in additional jurisdictions, predominantly within the United States. Our strategy is to expand our Sportsbook and iGaming product offerings into new jurisdictions as they are legalized and become accessible to the extent it is economically beneficial to do so. As of February 13, 2024, 35 U.S. states, the District of Columbia and Puerto Rico have legalized some form of sports betting. Of those 37 legal jurisdictions, 32 have legalized online sports betting. Of those 32 jurisdictions, 31 are live, and DraftKings operates in 24 of them. The U.S. jurisdictions with statutes legalizing iGaming are Connecticut, Delaware, Michigan, New Jersey, Pennsylvania, Rhode Island and West Virginia.

The process of securing the necessary licenses or partnerships to operate in each jurisdiction may take longer than we anticipate. In addition, legislative or regulatory restrictions and product taxes may make it less attractive or more difficult for us to operate in a particular jurisdiction. For example, certain jurisdictions require us to have a relationship with a retail operator for online Sportsbook access, which tends to increase our cost of revenue. States that have established state-run monopolies may limit opportunities for private sector participants like us. We nonetheless believe our proprietary gaming software positions us to become a partner of choice to power state-run sportsbooks.

States impose taxes on regulated offerings, the rates of which may vary substantially between states and product offerings. Sales taxes may also apply in certain jurisdictions. We are also subject to a federal excise tax of 25 basis points on the amount of each sportsbook bet.

Ability to Acquire, Retain and Monetize Users

We grow our business by attracting new paid users to our product offerings and increasing their level of engagement with our product offerings over time. To effectively attract and retain paid users and to re-engage former paid users, we invest in a

variety of marketing channels in combination with personalized customer promotions, most of which can be used across all of our product offerings (such as free contest entries or bets or matching deposits). These investments and personalized promotions are intended to increase consumer awareness and drive engagement.

Managing Betting Risk

Sports betting and iGaming are characterized by an element of chance. Our revenue is impacted by variations in the hold percentage (the ratio of net win to total amount wagered) on bets placed on, or the actual outcome of, games or events on which users bet. Although our product offerings generally perform within a defined statistical range of outcomes, actual outcomes may vary for any given period, and a single large bet or the result of a significant sporting event can have a sizeable impact on our short-term financial performance. Our hold is also affected by factors that are beyond our control, such as a user's experience and behavior, the mix of games played, the financial resources of users and the volume of bets placed. As a result of variability in these factors, actual hold rates on our product offerings may differ from the theoretical win rates we have estimated and could result in the winnings of our gaming users exceeding those anticipated. We seek to mitigate these risks through data science and analytics and rules built into our technology, as well as active management of our amounts at risk at a point in time, but we may not always be able to do so successfully, particularly over short periods, which can result in financial losses as well as revenue volatility.

Results of Operations

2023 Compared to 2022

The following table sets forth a summary of our consolidated results of operations for the years indicated, and the changes between periods. Due to the timing of the consummation of the GNOG Transaction, the below periods exclude GNOG's operations prior to the GNOG Closing Date of May 5, 2022.

(amounts in thousands, except percentages)	Year ended December 31,		\$ Change	% Change
	2023	2022		
Revenue	\$ 3,665,393	\$ 2,240,461	\$ 1,424,932	63.6 %
Cost of revenue	2,292,175	1,484,273	807,902	54.4 %
Sales and marketing	1,200,718	1,185,977	14,741	1.2 %
Product and technology	355,156	318,247	36,909	11.6 %
General and administrative	606,569	763,720	(157,151)	(20.6) %
Loss from operations	(789,225)	(1,511,756)	722,531	47.8 %
Interest income (expense), net	55,739	18,702	37,037	198.0 %
(Loss) gain on remeasurement of warrant liabilities	(57,543)	29,396	(86,939)	(295.8) %
Other (loss) income, net	(224)	20,700	(20,924)	(101.1) %
Loss before income tax (benefit) provision and loss from equity method investment	(791,253)	(1,442,958)	651,705	45.2 %
Income tax (benefit) provision	10,170	(67,866)	78,036	115.0 %
Loss (gain) from equity method investment	719	2,895	(2,176)	(75.2) %
Net Loss	\$ (802,142)	\$ (1,377,987)	\$ 575,845	41.8 %

Revenue. Revenue increased \$1,424.9 million, or 63.6%, to \$3,665.4 million in 2023, from \$2,240.5 million in 2022. The increase was primarily attributable to our online gaming revenues, which increased \$1,450.5 million, or 68.9%, to \$3,557.2 million in 2023 primarily due to MUPs increasing by 39.5% as compared to 2022. The increase in MUPs was due to strong player retention and acquisition across our Sportsbook and iGaming product offerings, as well as the expansion of our Sportsbook and iGaming product offerings into new jurisdictions. Online gaming revenues also increased due to structural improvement in our Sportsbook hold rate and improved promotional reinvestment for our Sportsbook and iGaming product offerings, which contributed to ARPMUP growth of 17.7% compared to 2022.

Cost of Revenue. Cost of revenue increased \$807.9 million, or 54.4%, to \$2,292.2 million in 2023, from \$1,484.3 million in 2022. Our online gaming product offerings accounted for substantially all of this increase, reflecting growth in revenue from our expanded product and jurisdictional footprint, including the launch of our Sportsbook product offering in Kentucky, Maine, Maryland, Massachusetts, and Ohio in 2023. In particular, the cost of revenue increase was primarily attributable to an increase in our variable expenses, such as product taxes and payment processing fees, which increased \$516.1 million and

\$107.3 million, respectively. The remaining increase was primarily attributable to an increase in our variable platform costs and revenue share arrangements resulting from additional customer activity.

Cost of revenue as a percentage of revenue decreased by 3.7 percentage points to 62.5% in 2023 from 66.2% in 2022, reflecting, in part, structural improvement in our Sportsbook hold rate and improved promotional reinvestment for our Sportsbook and iGaming product offerings, partially offset by a change in revenue mix from our more mature DFS product offering to our Sportsbook and iGaming product offerings, which, in general, produce revenue at a higher cost per revenue dollar relative to our more mature DFS product offering.

Sales and Marketing. Sales and marketing expense increased \$14.7 million, or 1.2%, to \$1,200.7 million in 2023, from \$1,186.0 million in 2022. The increase was primarily attributable to an increase of \$19.5 million in advertising costs spent to acquire users, partially offset by a reduction in compensation expense.

Product and Technology. Product and technology expense increased \$36.9 million, or 11.6%, to \$355.2 million in 2023 from \$318.2 million in 2022. The increase primarily reflects an increase of \$35.1 million in compensation expense due to increases in our product operations and engineering headcount.

General and Administrative. General and administrative expense decreased \$157.2 million, or 20.6%, to \$606.6 million in 2023 from \$763.7 million in 2022. This decrease was primarily driven by a decrease in stock-based compensation expense of \$174.1 million, a reduction in transaction-related costs of \$14.3 million and a reduction in advocacy expense of \$16.6 million partially offset by an increase in non-core litigation costs of \$27.5 million and in cash-based compensation expense due to an increase in headcount.

Gain on Remeasurement of Warrant Liabilities. We recorded a loss on remeasurement of warrant liabilities of \$57.5 million in 2023, compared to a gain of \$29.4 million in 2022 primarily due to changes in the underlying share price of our Class A common stock.

Other Income, net. Other income (loss), net was a loss of \$0.2 million in 2023, as compared to income of \$20.7 million in 2022. This decrease was primarily attributable to an increase in the fair value of certain financial assets recorded in 2022.

Income Tax (Benefit) Provision. We recorded an income tax provision of \$10.2 million in 2023, as compared to an income tax benefit of \$67.9 million in 2022. This change was primarily due to a discretely recorded income tax benefit of \$70.1 million, which was attributable to non-recurring partial releases of the Company's U.S. valuation allowance as a result of the GNOG purchase price allocation in 2022.

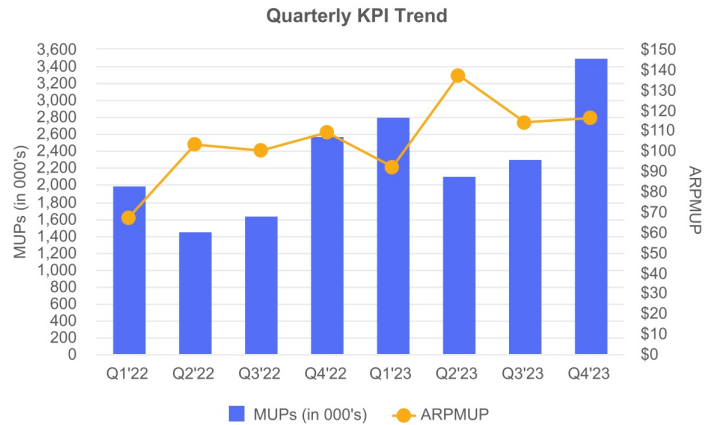
Net Loss. Net loss improved by \$575.8 million to \$802.1 million in 2023 from \$1,378.0 million in 2022 for the reasons discussed above.

2022 Compared to 2021

A discussion of changes in our results of operations in 2022 compared to 2021 has been omitted from this Annual Report, but may be found in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 17, 2023, which is available free of charge on the SEC's website at www.sec.gov and at www.DraftKings.com.

Quarterly Performance Trend and Seasonality

Our user engagement and financial performance is seasonal in nature, as indicated by the following chart, which presents our average MUPs and ARPMUP for the last eight quarters, and the explanations that follow.



Our business experiences the effects of seasonality based on the relative popularity of certain sports. Although our technology supports contests and betting on sporting events throughout the year, the fourth quarter is when our users tend to be most engaged, primarily due to the overlapping time frame of the NFL and NBA seasons, which are the most popular sports amongst our users. As a result, we have historically generated higher revenues in our fourth quarter compared to other quarters. We anticipate that this trend will continue, though our mix of revenues in each quarter and our key performance indicators will also be impacted by the timing of new jurisdiction launches and the introduction of new product offerings.

In addition, revenue and key performance indicators for a given quarter or fiscal year may differ substantially due primarily to professional sports season scheduling, including the frequency of play. For example, during the NFL season, our user engagement and revenue is generally highest on Sundays. The number of Sundays in a fiscal reporting period may differ from quarter to quarter and year to year, resulting in revenue volatility between comparative periods. In contrast, the MLB season, which traditionally falls in our second and third quarters, is characterized by numerous, daily games throughout the season, which tends to result in higher DFS contestant engagement and more Sportsbook bets per paid user relative to the NFL season. Historically, MLB play has attracted a more dedicated but smaller user base to our product offerings. The timing of the MLB season in combination with these factors has tended to result in lower MUPs in our second quarter, but a higher ARPMUP.

The suspension, postponement, rescheduling, shortening and cancellation of major sports seasons and sporting events may materially impact our results of operations by, for example, reducing our customers' use of, and spending on, our Sportsbook and DFS product offerings. However, our product offerings that do not rely on sports seasons and sporting events, such as iGaming, may partially offset such an adverse impact on revenue.

Liquidity and Capital Resources

We had \$1.3 billion in cash and cash equivalents as of December 31, 2023 (excluding restricted cash and cash reserved for users, which we segregate on behalf of our paid users for all jurisdictions and product offerings). We believe our cash on hand is sufficient to meet our current working capital and capital expenditure requirements for a period of at least twelve months. We will continue to evaluate our long-term operating performance and cash needs and believe we are well positioned to continue to fund the operations of our business long-term.

Our material cash requirements include the following contractual and other obligations.

Debt. In March 2021, we issued zero-coupon convertible senior notes in an aggregate principal amount of \$1,265.0 million (the “Convertible Notes”). The Convertible Notes mature on March 15, 2028, subject to earlier conversion, redemption or repurchase. In connection with the pricing of the Convertible Notes and the exercise of the option to purchase additional Convertible Notes, we entered into privately negotiated capped call transactions (the “Capped Call Transactions”). The Capped Call Transactions are expected generally to reduce potential dilution to DraftKings Inc.’s Class A common stock upon any conversion of the Convertible Notes. The net cost of \$124.0 million incurred to enter into the Capped Call Transactions was recorded as a reduction to additional paid-in capital on the Company’s consolidated balance sheet. As of December 31, 2023, the Convertible Notes, net of issuance costs, balance was \$1,253.8 million.

Leases. We have lease arrangements for certain corporate office facilities, data centers and motor vehicles. As of December 31, 2023, the Company had lease commitments of \$117.8 million, with \$16.5 million payable within twelve months.

Other Purchase Obligations. We have certain non-cancelable contracts with vendors, licensors and others requiring us to make future cash payments. As of December 31, 2023, these purchase obligations were \$1,404.6 million, with \$467.6 million payable within twelve months.

Cash Flows

The following table summarizes our cash flows for the periods indicated. Due to the timing of the consummation of the GNOG Transaction, the below periods exclude GNOG’s operations prior to the GNOG Closing Date of May 5, 2022.

(in thousands)	Year ended December 31,		
	2023	2022	2021
Net cash (used in) operating activities	\$ (1,751)	\$ (625,519)	\$ (419,508)
Net cash (used in) investing activities	(90,360)	(208,766)	(195,022)
Net cash (used in) provided by financing activities	(63,221)	(16,732)	1,138,813
Effect of foreign exchange rates on cash and cash equivalents, restricted cash, and cash reserved for users	—	—	583
Net (decrease) increase in cash and cash equivalents, restricted cash, and cash reserved for users	(155,332)	(851,017)	524,866
Cash and cash equivalents, restricted cash, and cash reserved for users at beginning of period	1,778,825	2,629,842	2,104,976
Cash and cash equivalents, restricted cash, and cash reserved for users at end of period	\$ 1,623,493	\$ 1,778,825	\$ 2,629,842

2023 Compared to 2022

Operating Activities. Net cash used in operating activities in 2023 was \$1.8 million, compared to \$625.5 million in 2022, primarily reflecting an improvement in net loss, net of non-cash items, of \$610.6 million for the reasons described above, slightly offset by changes in operating assets and liabilities.

Investing Activities. Net cash used in investing activities in 2023 decreased by \$118.4 million to \$90.4 million from \$208.8 million in 2022, mainly reflecting \$24.4 million of proceeds from the sale of marketable equity securities and other financial assets in 2023 and a reduction of \$96.5 million from cash paid for acquisitions, net of cash acquired, related to the GNOG Transaction in 2022, partially offset by an increase in cash paid for internally developed software.

Financing Activities. Net cash used in financing activities in 2023 increased by \$46.5 million to \$63.2 million from \$16.7 million in 2022, primarily reflecting an increase in purchases of treasury stock of \$54.5 million related to the satisfaction of withholding taxes due upon the vesting of restricted stock units, offset by an increase in proceeds from the exercise of stock options.

2022 Compared to 2021

A discussion of changes in cash flows in 2022 compared to 2021 has been omitted from this Annual Report, but may be found in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” of our Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 17, 2023, which is available free of charge on the SEC’s website at www.sec.gov and at www.DraftKings.com.

Critical Accounting Estimates

Our consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (“U.S. GAAP”). Preparation of the financial statements requires our management to make judgments, estimates and assumptions that impact the reported amount of revenue and expenses, assets and liabilities and the disclosure of contingent assets and liabilities. We consider an accounting judgment, estimate or assumption to be critical when (a) the estimate or assumption is complex in nature or requires a high degree of judgment and (b) the use of different judgments, estimates and assumptions could have a material impact on our consolidated financial statements. Our significant accounting policies are described in Note 2 of the consolidated financial statements included elsewhere in this Annual Report. Our critical accounting estimates are described below:

Loss Contingencies

Our loss contingencies, which are included within the “other long-term liabilities” caption on our consolidated balance sheets, are uncertain by nature and their estimation requires significant management judgment as to the probability of loss and estimation of the amount of loss. These contingencies include, but may not be limited to, litigation, regulatory investigations and proceedings and management’s evaluation of complex laws and regulations, including those relating to indirect taxes, and the extent to which they may apply to our business and industry. See Notes 7 and 15 to our consolidated financial statements for more information.

We regularly review our contingencies to determine whether the likelihood of loss is probable or reasonably possible and to assess whether a reasonable estimate of the loss can be made. Determination of whether a loss estimate can be made is a complex undertaking that considers the judgment of management, third-party research, the prospect of negotiation and interpretations by regulators and courts, among other information. When a loss is determined to be probable, as that term is defined under U.S. GAAP, and the amount of the loss can be reasonably estimated, an estimated contingent liability is recorded. We continually reevaluate our indirect tax and other positions for appropriateness.

Goodwill

Goodwill is tested for impairment at the reporting unit level, which is the same or one level below an operating segment. In accordance with ASC Topic 350 Intangibles - Goodwill and Other, our business is classified into one reporting unit. Prior to October 1, 2023, the Company had three reporting units to which goodwill was allocated. On October 1, 2023, the Company reassessed its reporting units and determined it operated as a single reporting unit. In accordance with ASC 350, because such reassessment redefined previously determined reporting units, all goodwill was reassigned to the consolidated reporting unit. We review and evaluate our goodwill and indefinite life intangible assets for potential impairment at a minimum annually, in the fourth quarter, or more frequently if circumstances indicate that impairment is possible.

In testing goodwill for impairment, we have the option to begin with a qualitative assessment, commonly referred to as “Step 0”, to determine whether it is more likely than not that the fair value of a reporting unit containing goodwill is less than its carrying value. This qualitative assessment may include, but is not limited to, reviewing factors such as macroeconomic conditions, industry and market considerations, cost factors, entity-specific financial performance and other events, including changes in our management, strategy and primary user base. If we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying value, we then perform a quantitative goodwill impairment analysis by comparing the carrying amount to the fair value of the reporting unit. In estimating the fair value of the reporting unit, we may use key assumptions such as revenue growth rates, gross margin, and estimated costs for future periods and well as peer group market valuation multiples and discount rates. If the carrying amount exceeds the fair value, goodwill will be written down to the fair value and recorded as impairment expense in the consolidated statements of operations. We perform our impairment testing annually and when circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. We performed our annual impairment assessment of goodwill as of October 1, 2023, which included consideration of the change in reporting units, and concluded that goodwill was not impaired.

Business Combinations

We account for business acquisitions in accordance with ASC Topic 805, *Business Combinations* (“ASC 805”). We measure the cost of an acquisition as the aggregate of the acquisition date fair values of the assets transferred and liabilities assumed and equity instruments issued. Transaction costs directly attributable to the acquisition are expensed as incurred. We record goodwill for the excess of (i) the total costs of acquisition, fair value of any non-controlling interests and acquisition date fair value of any previously held equity interest in the acquired business over (ii) the fair value of the identifiable net assets of the acquired business.

The acquisition method of accounting requires us to exercise judgment and make estimates and assumptions based on available information regarding the fair values of the elements of a business combination as of the date of acquisition, including the fair values of identifiable intangible assets, deferred tax asset valuation allowances, liabilities related to uncertain tax positions and contingencies. We must also refine these estimates over a one-year measurement period, to reflect any new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognized as of that date. If we are required to retroactively adjust provisional amounts that we have recorded for the fair value of assets and liabilities in connection with an acquisition, these adjustments could materially impact our results of operations and financial position. Estimates and assumptions that we must make in estimating the fair value of future acquired technology, user lists and other identifiable intangible assets include future cash flows that we expect to generate from the acquired assets. If the subsequent actual results and updated projections of the underlying business activity change compared with the assumptions and projections used to develop these values, we could record impairment charges. In addition, we have estimated the economic lives of certain acquired assets and these lives are used to calculate depreciation and amortization expenses. If our estimates of the economic lives change, depreciation or amortization expenses could be accelerated or slowed, which could materially impact our results of operations.

On the GNOG Closing Date of May 5, 2022, we completed our acquisition of 100% of the equity interests of GNOG pursuant to the GNOG Merger Agreement. The GNOG Transaction was accounted for under ASC 805. In accordance with the acquisition method, we recorded the fair value of assets acquired and liabilities assumed. The allocation of the consideration to the assets acquired and liabilities assumed is based on various estimates.

Stock-based Compensation

Our historical and outstanding stock-based compensation awards, including the issuances of options and other stock awards under our equity compensation plans, have typically included service-based or performance-based vesting conditions. For awards with only service-based vesting conditions, we record compensation cost for these awards using the straight-line method less an assumed forfeiture rate. For awards with performance-based or market-based vesting conditions, we recognize compensation cost on a tranche-by-tranche basis (the accelerated attribution method), based on the probability of achieving the performance criteria.

Stock-based compensation expense is measured based on the grant-date fair value of the stock-based awards and is recognized over the requisite service period of the awards. Prior to the DEAC Business Combination, our management and board of directors considered various objectives and subjective factors to determine the fair value of DK DE's common stock as of each grant date, including the value determined by a third-party valuation firm. These factors included, among other things, financial performance, capital structure, forecasted operating results and market performance analyses of similar companies in our industry. Following the DEAC Business Combination, the fair value of our Class A common stock is determined based on the quoted market price. To estimate the fair value of stock option awards, the Black-Scholes model is used to determine the fair value of grants with market-based conditions. The Black-Scholes model requires management to make a number of key assumptions, including risk-free interest rate, expected term, and expected volatility. The risk-free interest rate is estimated using the rate of return on U.S. treasury notes with a life that approximates the expected term. The expected term assumption used in the Black-Scholes model represents the period of time that the options are expected to be outstanding and is estimated using the midpoint between the requisite service period and the contractual term of the option. Expected volatility is based on an average volatility for a representative sample of comparable public companies, including the Company's own.

The assumptions underlying these valuations and management's assessment of achieving the performance criteria represent management's best estimates, which involve inherent uncertainties and the application of management judgment. As a result, if factors, probabilities, or expected outcomes change and our management uses significantly different assumptions or estimates, our stock-based compensation expense for future periods could be materially different.

Item 7A. Quantitative and Qualitative Disclosures about Market Risks.

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate risk, foreign currency risk and inflation risk as follows:

Interest Rate Risk

We had cash and cash equivalents totaling \$1.3 billion and \$1.3 billion at December 31, 2023 and December 31, 2022, respectively. Our cash and cash equivalents consist of highly liquid, unrestricted savings, checking and other bank accounts. The Company also utilizes money market funds and short-term deposits with original maturities of three months or less. The primary objectives of our investment activities are to preserve principal and provide liquidity without significantly increasing risk. Due to the relatively short-term nature of our portfolio, a hypothetical 100 basis point change in interest rates would not have a material effect on the fair value of our portfolio for the periods presented.

Foreign Currency Risk

The Company has exposure to changes in currency rates as a result of operations by subsidiaries in non-U.S. jurisdictions. Revenue and income/loss generated by international operations will increase or decrease compared to prior periods as a result of changes in foreign currency exchange rates. The operations impacted by foreign currency risk are not significant relative to the U.S. operations of the Company and, as a result, our exposure to foreign currency risk is not material. Currently, we do not otherwise hedge our foreign exchange exposure but may consider doing so in the future.

Inflation Risk

We do not believe that inflation has had a material effect on our business, financial condition, or results of operations. If our costs become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could harm our business, financial condition, and operating results.

Item 8. Financial Statements and Supplementary Data.

See financial statements included in Item 15 “*Exhibits, Financial Statement Schedules*” of this Annual Report.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) as of December 31, 2023, which is the end of the period covered by this Annual Report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that the Company’s disclosure controls and procedures were effective as of December 31, 2023 to ensure that information required to be disclosed by the Company in reports we file or submit under the Exchange Act is (i) recorded, processed, summarized, evaluated and reported, as applicable, within the time periods specified in the SEC’s rules and forms and (ii) accumulated and communicated to the Company’s management, including the Company’s Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures.

Management’s Report on Internal Control over Financial Reporting

The Company’s management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Management conducted an assessment of the effectiveness of the Company’s internal control over financial reporting based on the criteria set forth in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of our financial reporting for external purposes in accordance with U.S. GAAP. Based on the Company’s assessment, management has concluded that its internal control over financial reporting was effective as of December 31, 2023 to provide reasonable assurance regarding the

reliability of financial reporting and the preparation of financial statements in accordance with U.S. GAAP. Management has reviewed its assessment with the Audit Committee.

The Company's independent registered public accounting firm, BDO USA, P.C., has issued an audit report on the Company's internal control over financial reporting, which appears in Part II, Item 15 "*Exhibits, Financial Statement Schedules*" of this Annual Report.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act), during the three months ended December 31, 2023 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives, as specified above. Our management recognizes that any control system, no matter how well designed and operated, is based upon certain judgments and assumptions and cannot provide absolute assurance that its objectives will be met.

Item 9B. Other Information.

Rule 10b5-1 Trading Plans

Certain of our directors and executive officers have made, and may from time to time enter into trading plans or make elections to have shares sold or withheld to cover withholding taxes or pay the exercise price of options, which may be designed to satisfy the affirmative defense conditions of Rule 10b5-1 under the Exchange Act or may constitute non-Rule 10b5-1 trading arrangements (as defined in Item 408(c) of Regulation S-K).

During the fiscal quarter ended December 31, 2023, except as noted above, none of our directors or executive officers adopted or terminated any contract, instruction or written plan for the purchase or sale of Company securities that was designed to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any non-Rule 10b5-1 trading arrangement.

Letter Agreements

On February 14, 2024, the Company entered into letter agreements with each of Messrs. Jason Robins, the Company's Chief Executive Officer; Matthew Kalish, the Company's President, DraftKings North America; and Paul Liberman, the Company's President, Global Technology and Product, pursuant to which each executive officer agreed to a voluntary reduction in their respective base salaries to \$1 for fiscal year 2024 (the "Base Salary Reductions"). The Base Salary Reductions do not modify any other rights under each of Messrs. Robins', Kalish's and Liberman's employment agreements that are determined by reference to such executive officer's base salary (other than to the extent otherwise described in such letter agreements), and such provisions will continue to be applied based on the base salary rate in effect without giving effect to any Base Salary Reductions. Furthermore, the Base Salary Reductions are not intended to reduce any Company employee benefit provided to Messrs. Robins, Kalish and Liberman that is determined by reference to base salary, except that life and disability insurance will not be provided to Messrs. Robins, Kalish and Liberman during the applicable Base Salary Reduction period.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item will be included in our Proxy Statement for the 2024 Annual Meeting of Stockholders to be filed with the SEC, within 120 days of the fiscal year ended December 31, 2023 (the “2024 Proxy Statement”), and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this item will be included in our 2024 Proxy Statement, which is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item will be included in our 2024 Proxy Statement, which is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item will be included in our 2024 Proxy Statement, which is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services.

The information required by this item will be included in our 2024 Proxy Statement, which is incorporated herein by reference.

Item 15. Exhibits, Financial Statement Schedules.

(a) Documents filed as part of this report

(a)(1) Financial Statements

Audited Consolidated Financial Statements of DraftKings Inc. for the years ended December 31, 2023, December 31, 2022 and December 31, 2021:[Reports of Independent Registered Public Accounting Firm \(BDO USA P.C.\), Boston, Massachusetts; PCAOB ID#243\)](#)[71](#)[Consolidated Balance Sheets](#)[F-1](#)[Consolidated Statements of Operations](#)[F-3](#)[Consolidated Statements of Comprehensive Loss](#)[F-4](#)[Consolidated Statements of Changes in Stockholders' Equity](#)[F-5](#)[Consolidated Statements of Cash Flows](#)[F-7](#)[Notes to the Consolidated Financial Statements](#)[F-9](#)

(2) Financial Statement Schedule

Financial statement schedules have been omitted because they are either not required or not applicable or the information is included in the consolidated financial statements or the notes thereto.

(3) Exhibits: The exhibits to this report are listed in the exhibit index below.

(3)(b) Description of Exhibits

[Exhibit Index](#)[74](#)

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Stockholders and Board of Directors
DraftKings Inc.
Boston, Massachusetts

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of DraftKings Inc. (the “Company”) as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive loss, changes in stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company’s internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) and our report dated February 16, 2024 expressed an unqualified opinion thereon.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Assessment of the probability of achieving the vesting performance criteria of performance-based stock compensation plan awards

As described in Notes 2 and 11 to the consolidated financial statements, the Company issues stock options and other stock awards to employees with performance-based vesting conditions pursuant to its performance-based stock compensation plan (“PSP Awards”). The Company recognizes compensation cost for PSP Awards on a tranche-by-tranche basis (the accelerated attribution method), based on the probability of achieving the performance criteria. PSP Awards granted in 2023 and 2022 vest based on achievement of revenue and Adjusted EBITDA targets and have a range of payouts from 0% to 200%. For the year ended December 31, 2023, stock-based compensation expense attributable to all PSP Awards was \$126.1 million.

We identified the assessment of the probability of achieving the performance-based vesting criteria and the related estimated payment of certain PSP Awards as a critical audit matter. The revenue and Adjusted EBITDA projections used in the probability assessment for certain PSP Awards require significant judgement due to the subjectivity of the revenue growth rates, Adjusted EBITDA margins and certain other assumptions used in the projections. Auditing these elements required especially challenging and subjective auditor judgment due to the nature and extent of effort required to address these matters.

The primary procedures we performed to address this critical audit matter included evaluating the reasonableness of the revenue growth rates, Adjusted EBITDA margins and certain other assumptions used in the projections by:

- Comparing the Company's revenue and Adjusted EBITDA projections for the current year to current year results.
- Evaluating the consistency of the revenue growth rates and certain other assumptions with external industry data.
- Comparing the forecasted growth in revenue, forecasted Adjusted EBITDA margins and certain other assumptions to historical results.

/s/ BDO USA, P.C.

We have served as the Company's auditor since 2016.
Boston, Massachusetts
February 16, 2024

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Stockholders and Board of Directors
DraftKings Inc.
Boston, Massachusetts

Opinion on Internal Control over Financial Reporting

We have audited DraftKings Inc.'s (the "Company's") internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO criteria"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive loss, changes in stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2023, and the related notes and our report dated February 16, 2024 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying, "Item 9A, Management's Report on Internal Control over Financial Reporting". Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of internal control over financial reporting in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ BDO USA, P.C.

Boston, Massachusetts
February 16, 2024

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DRAFTKINGS INC.CONSOLIDATED BALANCE SHEETS
(Amounts in thousands, except par value)

	December 31,	
	2023	2022
Assets		
Current assets:		
Cash and cash equivalents	\$ 1,270,503	\$ 1,309,172
Restricted cash	11,700	—
Cash reserved for users	341,290	469,653
Receivables reserved for users	301,770	160,083
Accounts receivable	47,539	51,097
Prepaid expenses and other current assets	98,565	94,836
Total current assets	2,071,367	2,084,841
Property and equipment, net	60,695	60,102
Intangible assets, net	690,620	776,934
Goodwill	886,373	886,373
Operating lease right-of-use assets	93,985	65,957
Equity method investments	10,280	10,080
Deposits and other non-current assets	131,546	155,865
Total assets	\$ 3,944,866	\$ 4,040,152
Liabilities and Stockholders' equity		
Current liabilities:		
Accounts payable and accrued expenses	\$ 639,599	\$ 517,587
Liabilities to users	851,898	686,173
Operating lease liabilities, current portion	11,499	4,253
Other current liabilities	46,624	38,444
Total current liabilities	1,549,620	1,246,457
Convertible notes, net of issuance costs	1,253,760	1,251,103
Non-current operating lease liabilities	80,827	69,332
Warrant liabilities	63,568	10,680
Long-term income tax liabilities	72,810	69,858
Other long-term liabilities	83,975	70,029
Total liabilities	\$ 3,104,560	\$ 2,717,459
Commitments and contingent liabilities (Notes 7 and 15)		
Stockholders' equity:		
Class A common stock, \$0.0001 par value; 900,000 shares authorized as of December 31, 2023 and December 31, 2022, respectively; 484,598 and 459,265 shares issued and 472,697 and 450,575 outstanding at December 31, 2023 and December 31, 2022, respectively	\$ 46	\$ 45
Class B common stock, \$0.0001 par value; 900,000 shares authorized as of December 31, 2023 and December 31, 2022; 393,014 shares issued and outstanding at December 31, 2023 and December 31, 2022	39	39
Treasury stock, at cost; 11,901 and 8,690 shares as of December 31, 2023 and December 31, 2022, respectively	(412,182)	(332,133)
Additional paid-in capital	7,149,858	6,750,055
Accumulated deficit	(5,933,943)	(5,131,801)
Accumulated other comprehensive income	36,488	36,488
Total stockholders' equity	840,306	1,322,693
Total liabilities and stockholders' equity	\$ 3,944,866	\$ 4,040,152

See accompanying notes to consolidated financial statements.

DRAFTKINGS INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(Amounts in thousands, except per share amounts)

	Years ended December 31,		
	2023	2022	2021
Revenue	\$ 3,665,393	\$ 2,240,461	\$ 1,296,025
Cost of revenue	2,292,175	1,484,273	794,162
Sales and marketing	1,200,718	1,185,977	981,500
Product and technology	355,156	318,247	253,655
General and administrative	606,569	763,720	828,325
Loss from operations	(789,225)	(1,511,756)	(1,561,617)
Other income (expense):			
Interest income	58,418	21,353	4,066
Interest expense	(2,679)	(2,651)	(2,109)
(Loss) gain on remeasurement of warrant liabilities	(57,543)	29,396	30,065
Other (loss) gain, net	(224)	20,700	11,951
Loss before income tax provision (benefit) and loss (income) from equity method investment	(791,253)	(1,442,958)	(1,517,644)
Income tax (benefit) provision	10,170	(67,866)	8,269
Loss (income) from equity method investment	719	2,895	(2,718)
Net loss attributable to common stockholders	\$ (802,142)	\$ (1,377,987)	\$ (1,523,195)
Loss per share attributable to common stockholders:			
Basic and diluted	\$ (1.73)	\$ (3.16)	\$ (3.78)

See accompanying notes to consolidated financial statements.

Due to the timing of the GNOG Transaction (as defined below), the above periods exclude the operations of GNOG (as defined below) prior to the closing date of May 5, 2022.

DRAFTKINGS INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(Amounts in thousands)

	Year ended December 31,		
	2023	2022	2021
Net loss attributable to common stockholders	\$ (802,142)	\$ (1,377,987)	\$ (1,523,195)
Other comprehensive (loss) income			
Foreign currency translation adjustments, net of nil tax	—	—	(47,046)
Comprehensive loss	<u>\$ (802,142)</u>	<u>\$ (1,377,987)</u>	<u>\$ (1,570,241)</u>

See accompanying notes to consolidated financial statements.

Due to the timing of the GNOG Transaction (as defined below), the above periods exclude the operations of GNOG (as defined below) prior to the closing date of May 5, 2022.

DRAFTKINGS INC.

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(Amounts in thousands)

	Class A Common Stock		Class B Common Stock		Additional Paid in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Treasury Stock Amount	Total Stockholders' Equity
	Shares	Amount	Shares	Amount					
Balances at December 31, 2022	450,575	\$ 45	393,014	\$ 39	\$ 6,750,055	\$ (5,131,801)	\$ 36,488	\$ (332,133)	\$ 1,322,693
Exercise of stock options	3,943	—	—	—	16,540	—	—	—	16,540
Stock-based compensation expense	—	—	—	—	378,321	—	—	—	378,321
Equity consideration issued for acquisitions	—	—	—	—	—	—	—	—	—
Exercise of warrants	153	—	—	—	4,942	—	—	—	4,942
Purchase of treasury stock	(3,211)	—	—	—	—	—	—	(80,049)	(80,049)
Restricted stock unit vesting	21,237	1	—	—	—	—	—	—	1
Net loss	—	—	—	—	—	(802,142)	—	—	(802,142)
Balances at December 31, 2023	472,697	\$ 46	393,014	\$ 39	\$ 7,149,858	\$ (5,933,943)	\$ 36,488	\$ (412,182)	\$ 840,306

	Class A Common Stock		Class B Common Stock		Additional Paid in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Treasury Stock Amount	Total Stockholders' Equity
	Shares	Amount	Shares	Amount					
Balances at December 31, 2021	407,781	\$ 41	393,014	\$ 39	\$ 5,702,388	\$ (3,753,814)	\$ 36,488	\$ (306,614)	\$ 1,678,528
Exercise of stock options	3,267	—	—	—	8,743	—	—	—	8,743
Stock-based compensation expense	—	—	—	—	578,799	—	—	—	578,799
Equity consideration issued for acquisition	29,252	3	—	—	460,125	—	—	—	460,128
Purchase of treasury stock	(1,560)	—	—	—	—	—	—	(25,519)	(25,519)
Restricted stock unit vesting	11,835	1	—	—	—	—	—	—	1
Net loss	—	—	—	—	—	(1,377,987)	—	—	(1,377,987)
Balances at December 31, 2022	450,575	\$ 45	393,014	\$ 39	\$ 6,750,055	\$ (5,131,801)	\$ 36,488	\$ (332,133)	\$ 1,322,693

	Class A Common Stock		Class B Common Stock		Additional Paid in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Treasury Stock Amount	Total Stockholders' Equity
	Shares	Amount	Shares	Amount					
Balances at December 31, 2020	396,303	\$ 40	393,014	\$ 39	\$ 5,067,135	\$ (2,230,619)	\$ 83,534	\$ (288,784)	\$ 2,631,345
Exercise of stock options	9,421	1	—	—	31,478	—	—	—	31,479
Stock-based compensation expense	—	—	—	—	683,293	—	—	—	683,293
Purchase of capped call options	—	—	—	—	(123,970)	—	—	—	(123,970)
Equity consideration issued for acquisition	520	—	—	—	33,149	—	—	—	33,149
Exercise of warrants	337	—	—	—	9,205	—	—	—	9,205
Purchase of treasury stock	(323)	—	—	—	—	—	—	(17,830)	(17,830)
Restricted stock unit vesting	1,523	—	—	—	—	—	—	—	—
Foreign currency translation	—	—	—	—	—	—	(47,046)	—	(47,046)
Other	—	—	—	—	2,098	—	—	—	2,098
Net loss	—	—	—	—	—	(1,523,195)	—	—	(1,523,195)
Balances at December 31, 2021	407,781	\$ 41	393,014	\$ 39	\$ 5,702,388	\$ (3,753,814)	\$ 36,488	\$ (306,614)	\$ 1,678,528

See accompanying notes to consolidated financial statements.

Due to the timing of the GNOG Transaction (as defined below), the above periods exclude the operations of GNOG (as defined below) prior to the closing date of May 5, 2022.

DRAFTKINGS INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Amounts in thousands)

	Year ended December 31,		
	2023	2022	2021
Cash Flows from Operating Activities:			
Net loss attributable to common shareholders	\$ (802,142)	\$ (1,377,987)	\$ (1,523,195)
Adjustments to reconcile net loss to net cash flows used in operating activities:			
Depreciation and amortization	201,920	169,252	121,138
Non-cash interest expense, net	386	870	2,109
Stock-based compensation expense	398,463	578,799	683,293
Loss (gain) on remeasurement of warrant liabilities	57,543	(29,396)	(30,065)
Loss (gain) from equity method investment	719	2,895	(2,718)
Loss (gain) on marketable equity securities and other financial assets, net	75	(10,999)	(11,311)
Deferred income taxes	5,849	(73,407)	(15,509)
Other expenses, net	554	(7,268)	—
Change in operating assets and liabilities, net of effect of acquisitions:			
Receivables reserved for users	(141,687)	(105,320)	(21,700)
Accounts receivables	3,558	2,506	(1,787)
Prepaid expenses and other current assets	2,451	(26,217)	(10,078)
Deposits and other non-current assets	(19,355)	(4,921)	(6,458)
Operating leases, net	6,558	1,304	(1,059)
Accounts payable and accrued expenses	103,593	95,269	167,927
Liabilities to users	165,725	152,985	210,932
Long-term income tax liability	2,952	(9,267)	13,227
Other long-term liabilities	11,087	15,383	5,746
Net cash flows used in operating activities	(1,751)	(625,519)	(419,508)
Cash Flows from Investing Activities:			
Purchases of property and equipment	(20,902)	(32,402)	(15,925)
Cash paid for internally developed software costs	(80,378)	(64,030)	(46,542)
Acquisition of gaming licenses	(12,105)	(7,213)	(35,809)
Proceeds from (purchase of) marketable equity securities and other financial assets	24,425	—	(25,000)
Cash paid for acquisitions, net of cash acquired	—	(96,507)	(64,970)
Other investing activities, net	(1,400)	(8,614)	(6,776)
Net cash flows used in investing activities	(90,360)	(208,766)	(195,022)
Cash Flow from Financing Activities:			
Proceeds from issuance of convertible notes, net	—	—	1,248,025
Purchase of capped call options	—	—	(123,970)
Proceeds from exercise of warrants	288	44	693
Purchase of treasury stock	(80,049)	(25,519)	(17,830)
Proceeds from exercise of stock options	16,540	8,743	31,479
Other financing activities	—	—	416
Net cash flows (used in) provided by financing activities	(63,221)	(16,732)	1,138,813
Effect of foreign exchange rates on cash and cash equivalents, restricted cash, and cash reserved for users	—	—	583

Net (decrease) increase in cash and cash equivalents, restricted cash, and cash reserved for users	(155,332)	(851,017)	524,866
Cash and cash equivalents, restricted cash, and cash reserved for users at the beginning of period	1,778,825	2,629,842	2,104,976
Cash and cash equivalents, restricted cash, and cash reserved for users at the end of period	<u>\$ 1,623,493</u>	<u>\$ 1,778,825</u>	<u>\$ 2,629,842</u>
Disclosure of cash and cash equivalents, restricted cash, and cash reserved for users			
Cash and cash equivalents	\$ 1,270,503	\$ 1,309,172	\$ 2,152,892
Restricted cash	11,700	—	—
Cash reserved for users	341,290	469,653	476,950
Cash and cash equivalents, restricted cash, and cash reserved for users at the end of period	<u>\$ 1,623,493</u>	<u>\$ 1,778,825</u>	<u>\$ 2,629,842</u>
Supplemental Disclosure of Noncash Investing and Financing Activities:			
Investing activities included in accounts payable and accrued expenses	569	9,155	(3,758)
Equity consideration issued for acquisitions	—	460,128	33,149
Decrease in warrant liabilities from cashless exercise of warrants	4,654	—	—
Supplemental Disclosure of Cash Activities:			
(Decrease) increase in cash reserved for users	(128,363)	(7,297)	189,232
Cash paid for interest	—	—	—
Cash paid for income taxes, net of refunds	8,341	10,366	5,632

See accompanying notes to consolidated financial statements.

Due to the timing of the GNOG Transaction (as defined below), the above periods exclude the operations of GNOG (as defined below) prior to the closing date of May 5, 2022.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands, unless otherwise noted)**1. Description of Business**

We are a digital sports entertainment and gaming company. We provide users with online sports betting (“Sportsbook”), online casino (“iGaming”) and daily fantasy sports (“DFS”) product offerings, as well as retail sportsbook, media and other consumer product offerings. We are also involved in the design and development of sports betting and casino gaming software for online and retail sportsbooks and iGaming operators.

In May 2018, the Supreme Court (the “Court”) struck down on constitutional grounds the Professional and Amateur Sports Protection Act of 1992 (“PASPA”), a law that prohibited most states from authorizing and regulating sports betting. Since the Court’s decision, many states have legalized sports betting. As of December 31, 2023, 35 U.S. states, the District of Columbia and Puerto Rico have legalized some form of sports betting. Of those 37 legal jurisdictions, 32 have legalized online sports betting. Of those 32 jurisdictions, 30 are live, and DraftKings operates in 23 of them. The U.S. jurisdictions with statutes legalizing iGaming are Connecticut, Delaware, Michigan, New Jersey, Pennsylvania, Rhode Island and West Virginia.

As of December 31, 2023, we operate our online sports betting product offering in Arizona, Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Massachusetts, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, Tennessee, Virginia, West Virginia, Wyoming and Ontario, Canada and we operate retail sportsbooks in Arizona, Colorado, Connecticut, Illinois, Iowa, Kansas, Louisiana, Michigan, Mississippi, New Hampshire, New Jersey and Washington. As of December 31, 2023, the Company offers its iGaming product offering in Connecticut, Michigan, New Jersey, Pennsylvania, West Virginia and Ontario, Canada. The Company also has arrangements in place with land-based casinos to expand operations into additional states upon the passing of relevant legislation, the issuance of related regulations and the receipt of required licenses.

As further discussed in Note 3 hereof entitled “Acquisition of Golden Nugget Online Gaming, Inc.,” on May 5, 2022 (the “GNOG Closing Date”), DraftKings Inc. (formerly New Duke Holdco, Inc.) consummated the acquisition of Golden Nugget Online Gaming, Inc., a Delaware corporation (together with its subsidiaries unless the context requires otherwise, “GNOG”), pursuant to a definitive agreement and plan of merger, dated August 9, 2021 (the “GNOG Merger Agreement”), in an all-stock transaction (the “GNOG Transaction”). In connection with the GNOG Transaction, DraftKings Inc. undertook a holding company reorganization whereby (i) each share of DraftKings Holdings Inc. (formerly DraftKings Inc.), a Nevada corporation (“Old DraftKings”), Class A common stock and Class B common stock was converted on a one-for-one basis into a share of DraftKings Inc. Class A common stock and Class B common stock, respectively, and (ii) DraftKings Inc. became the going-forward public company and the direct parent company of both Old DraftKings and GNOG. DraftKings Inc. is the registrant filing this Annual Report on Form 10-K as the successor registrant for Old DraftKings. Unless otherwise indicated or the context otherwise requires, the terms “DraftKings”, the “Company”, “we”, “us” and “our” refer to DraftKings Inc. (or, in respect of periods prior to the GNOG Closing Date, Old DraftKings), together with its consolidated subsidiaries.

2. Summary of Significant Accounting Policies and Practices***Basis of Presentation and Principles of Consolidation***

The accompanying consolidated financial statements are presented in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”) and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (the “SEC”). The consolidated financial statements include the accounts and operations of the Company and its subsidiaries. All intercompany accounts and transactions are eliminated upon consolidation. Certain amounts, which are not material, in the prior years’ consolidated financial statements have been reclassified to conform to the current year presentation.

The Company consummated the GNOG Transaction on the GNOG Closing Date. In the GNOG Transaction, the Company was determined to be the accounting acquirer and, as such, the acquisition is considered a business combination under Accounting Standards Codification (“ASC”) Topic 805, *Business Combinations*, and was accounted for using the acquisition method of accounting. These consolidated financial statements include the accounts and operations of the Company, except that, due to the timing of the consummation of the GNOG Transaction, these consolidated financial statements exclude the operations of GNOG prior to the GNOG Closing Date.

Segments

The Company regularly reviews its operating segments and the approach used by the chief operating decision maker (“CODM”) to evaluate performance and allocate resources. Prior to the fourth quarter of 2022, the Company had two distinct operating segments: a business-to-consumer (“B2C”) segment, which included its Sportsbook, iGaming and DFS product offerings, as well as media and other consumer product offerings, and a business-to-business (“B2B”) segment, which had principal activities involving the design and development of gaming software.

However, beginning in the fourth quarter of 2022, as a result of the Company’s integration of the technology and expertise of SBTech, the Company began to view the B2B segment primarily as a cost center of the B2C segment and, therefore, began to operate its business and report its results as a single operating segment. The Company’s determination that it operates as a single segment is consistent with the CODM’s regular review of consolidated financial information for the purposes of evaluating performance, allocating resources and planning and forecasting for future periods. Prior periods have been reclassified to conform to the new segment presentation.

Foreign Currency and Comprehensive Loss

Prior to January 1, 2022, the Company’s reporting currency was the U.S. dollar while the functional currency of the Company’s significant non-U.S. subsidiaries was the Euro. The financial statements of the Company’s significant non-U.S. subsidiaries were translated into United States dollars in accordance with ASC 830, *Foreign Currency Matters*, using period-end rates of exchange for assets and liabilities, and average rates of exchange for the period for revenues, costs and expenses and historical rates for equity. For the period ending December 31, 2021, the translation gain is included in the consolidated statements of comprehensive loss. Effective as of January 1, 2022, the Company’s reporting currency remained the U.S. dollar and the functional currency of the Company’s significant non-U.S. subsidiaries’ functional currency was changed from the Euro to the U.S. dollar. Accordingly, the Company did not have to translate the financial statements of its significant non-U.S. subsidiaries for the years ended December 31, 2023 and 2022.

During 2023, 2022 and 2021, foreign currency transactions did not have a material impact on net loss.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant estimates and assumptions reflected in the financial statements relate to and include, but are not limited to, the valuation and expensing of equity awards, accounting for contingencies and uncertainties, purchase price allocations, including fair value estimates of intangible assets, the estimated useful lives of fixed assets and intangible assets, internally developed software costs and accrued expenses.

Going Concern

The Company currently expects that its cash will be sufficient to fund its operating expenses and capital expenditure requirements for at least twelve months after February 16, 2024. The Company has experienced operating losses and negative operating cash flows for the years ended December 31, 2023, 2022 and 2021. While certain jurisdictions will experience improved operating cash flow, the Company expects to continue to incur annual operating losses for the next twelve months.

Concentration Risks and Uncertainties

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, restricted cash, and cash reserved for users. The Company maintains separate accounts for cash and cash reserved for users primarily across several financial institutions. Some of the amounts held exceed federally insured limits. Management believes all financial institutions holding its cash are of high credit quality and does not believe the Company is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company relies on a limited number of vendors to support operations. In particular, a single vendor is currently the primary provider of web services that allow the Company to host its Sportsbook, iGaming and DFS product offerings. Any

interruption in the services provided by this supplier could have a material adverse effect on its business, financial condition and results of operations.

The Company's growth prospects and market potential will depend on its ability to obtain and maintain licenses to operate in a number of jurisdictions, and if the Company fails to obtain and maintain such licenses, its business, financial condition, results of operations and prospects could be impaired.

We conduct business in numerous countries that carry high levels of currency, political, compliance and economic risk. For example, we have offices in Ukraine and Israel, and the military conflict between Russia and Ukraine and the evolving conflict in Israel and Gaza and any business interruptions or other spillover effects from such conflicts could adversely affect our operations.

Business Combinations

The Company accounts for business combinations under the acquisition method of accounting, in accordance with ASC 805, which requires assets acquired and liabilities assumed to be recognized at their fair values as of the acquisition date. Any fair value of purchase consideration in excess of the fair value of the assets acquired less liabilities assumed is recorded as goodwill. The fair values of the assets acquired and liabilities assumed are determined based upon the valuation of the acquired business and involve management making significant estimates and assumptions.

Cash and Cash Equivalents

Cash and cash equivalents consist of highly liquid, unrestricted savings, checking, money market funds with original maturities of less than three months and other bank accounts.

Restricted Cash

Restricted cash refers to cash that is held by the company but cannot be used for continuing operations. Restricted cash as of December 31, 2023, primarily relates to collateral for a letter of credit in connection with a cyber-security insurance policy entered into in 2023.

Cash Reserved for Users

The Company maintains separate bank accounts to segregate users' funds from operational funds. In certain regulated jurisdictions, user funds are held by DK Player Reserve LLC, a Delaware limited liability company and wholly owned subsidiary of DraftKings Inc., which was organized for the purpose of protecting users' funds in the event of creditor claims and complying with certain regulatory requirements of gaming authorities in certain jurisdictions.

Receivables Reserved for Users

Receivables for user deposits not yet received are stated at the amount the Company expects to collect from a payment processor, which includes an allowance for credit losses if appropriate. These receivables arise, primarily, due to process timing between when a user deposits and when the Company receives that deposit from the payment processor. The allowance for credit losses is determined based on the Company's assessment of the probability of the non-payment of the receivable. This provision is netted against the receivable balance with the loss being recognized within general and administrative expenses in the consolidated statements of operations. As of and for the years ending December 31, 2023 and December 31, 2022, the provision did not have a material impact on the Company's consolidated financial statements.

Accounts Receivables

Accounts receivables are recorded at amortized cost, less any allowance for credit losses. The allowance for credit losses is determined based on the Company's assessment of the probability of non-payment of the receivable after all means of collection have been exhausted and the potential for recovery is considered remote. This provision is netted against the receivable balance with the loss being recognized within general and administrative expenses in the consolidated statements of operations. As of and for the years ending December 31, 2023 and December 31, 2022, the provision did not have a material impact on the Company's consolidated financial statements.

Digital Assets and Liabilities

On March 31, 2022, the SEC issued Staff Accounting Bulletin No. 121 (“SAB 121”). SAB 121 sets out interpretive guidance from the staff of the SEC regarding the accounting for obligations to safeguard digital assets that an entity holds for its users, which was effective from the first interim period commencing after June 15, 2022, with retroactive application as of the beginning of the fiscal year to which the interim or annual period relates. In accordance with SAB 121, the Company recognized a liability for the obligation to safeguard its users’ assets and recognized an associated asset for non-fungible tokens (“NFTs”) held for its users. Both the liability and the associated asset are measured at the fair value of the NFTs being safeguarded. Refer to Note 8 hereof for disclosures required in accordance with ASC 820, *Fair Value Measurement*.

Property and Equipment, Net

Property and equipment are carried at cost, net of accumulated depreciation. Depreciation is computed utilizing the straight-line method over the estimated useful life of the asset. Leasehold improvements depreciation is computed over the shorter of the lease term or estimated useful life of the asset. Additions and improvements are capitalized, while repairs and maintenance are expensed as incurred. Useful lives of each asset class are generally as follows:

Computer equipment and software	3 years
Furniture and fixtures	7 years
Leasehold improvements	Lesser of the lease terms or the estimated useful lives of the improvements, generally 1–10 years

Intangible Assets, Net

The Company’s intangible assets consist of developed technology, customer relationships, internally-developed software, gaming licenses, trademarks and tradenames and digital assets. The related amortization expense is classified as cost of revenue in the consolidated statements of operations. Estimates and assumptions that we must make in estimating the fair value of future acquired technology, user lists and other identifiable intangible assets include future cash flows that we expect to generate from the acquired assets.

Developed Technology

Developed technology primarily relates to the design and development of sports betting and casino gaming software for online and retail sportsbook and casino gaming products acquired from SBTech and other acquisitions and recorded at fair value at the date of acquisition.

Internally Developed Software

Software that is developed for internal use is accounted for pursuant to ASC 350-40, *Intangibles, Goodwill and Other—Internal-Use Software*. Qualifying costs incurred to develop internal-use software are capitalized when (i) the preliminary project stage is completed, (ii) management has authorized further funding for the completion of the project and (iii) it is probable that the project will be completed and perform as intended. These capitalized costs include compensation for employees who develop internal-use software and external costs related to development of internal use software. Capitalization of these costs ceases once the project is substantially complete and the software is ready for its intended purpose. Internally developed software is amortized using the straight-line method over an estimated useful life. All other expenditures, including those incurred in order to maintain an intangible asset’s current level of performance, are expensed as incurred. When intangible assets are retired or disposed of, the cost and accumulated amortization thereon are removed, and any resulting gain or losses are included in the consolidated statements of operations.

Gaming Licenses

The Company incurs fees in connection with applying for and maintaining good standing in jurisdictions via business licenses. Fees incurred in connection with the application and subsequent renewals are capitalized and amortized using the straight-line method over an estimated useful life. In certain arrangements, the Company enters into agreements to operate on a business partner’s license in exchange for upfront fees. These fees are capitalized and amortized over the shorter of their expected benefit under the partnership agreement or estimated useful life.

Customer Relationships

Customer (or “user”) relationships are finite-lived intangible assets, which are amortized over their estimated economic lives. Customer relationships are generally recognized as the result of business combinations.

Trademarks and Tradenames

The Company incurs fees in connection with applying for and maintaining trademarks and tradenames as well as trademarks and tradenames resulting from acquisitions. Fees incurred in connection with the application and subsequent renewals are capitalized and amortized using the straight-line method over an estimated useful life.

Digital Assets

The Company has purchased certain digital assets, including crypto currencies, with cash that is not required to currently support its operations. The Company accounts for digital assets in accordance with ASC 350, *Intangibles—Goodwill and Other (Topic 350)*. Accordingly, if the fair market value at any point during the reporting period is lower than the carrying value an impairment loss equal to the difference will be recognized in the consolidated statement of operations. We have not recorded any significant impairments.

Impairment of Long-Lived Assets

Long-lived assets, except for goodwill and indefinite-lived intangible assets, consist of property and equipment and finite-lived acquired intangible assets, such as internal-use software, developed software, gaming licenses, trademarks, tradenames, and customer relationships. Long-lived assets, except for goodwill and indefinite-lived assets, are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the asset may not be fully recoverable. Impairment expense is recognized to the extent an asset’s expected undiscounted future cash flows are less than the asset’s carrying amount. The Company determined that there was no impairment of long-lived assets during 2023, 2022, or 2021.

Goodwill

The Company regularly reviews its reporting units and the approach used by the CODM and segment management to evaluate performance and allocate resources. Prior to 2023, the Company’s business was classified into three reporting units: B2C, Media and B2B. However, as a result of the Company’s integration of its B2B business and change in reporting structure to the CODM, the Company determined that it only had one reporting unit as of October 1, 2023, the Company’s annual goodwill impairment assessment date. In testing goodwill for impairment, the Company has the option to begin with a qualitative assessment, commonly referred to as “Step 0,” to determine whether it is more likely than not that the fair value of a reporting unit containing goodwill is less than its carrying value. This qualitative assessment may include, but is not limited to, reviewing factors such as macroeconomic conditions, industry and market considerations, cost factors, entity-specific financial performance and other events, such as changes in the Company’s management, strategy and primary user base. If the Company determines that it is more likely than not that the fair value of a reporting unit is less than its carrying value, the Company performs a quantitative goodwill impairment analysis by comparing the carrying amount to the fair value of the reporting unit. If the carrying amount exceeds the fair value, goodwill will be written down to the fair value and recorded as impairment expense in the consolidated statements of operations. The Company performs its impairment testing annually and when circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. The Company performed its annual impairment assessment of goodwill as of October 1, 2023 and, with consideration regarding the change in reporting units, concluded that goodwill was not impaired.

Equity Method Investments

The Company has a 49.9% membership interest in DKFS, LLC, also known as DRIVE by DraftKings as of December 31, 2023. In addition, the Company has committed to invest up to \$17.5 million into DBDK Venture Fund I, LP, a Delaware limited partnership and a subsidiary of DKFS LLC. As of December 31, 2023, the Company had invested a total of \$7.6 million of the total commitment, which represents ownership of approximately 28.6% in the fund.

The Company uses the equity method to account for investments in which the Company has the ability to exercise significant influence over the operating and financial policies of the investee, but it does not exercise control and is not the primary beneficiary. The Company’s judgment regarding its level of influence over the equity method investee includes considering key factors, such as ownership interest, representation on the board of directors, and participation in policy-making decisions. The Company’s carrying value in the equity method investee is reflected in the caption “Equity method investments”

on the consolidated balance sheets. Changes in value of DKFS, LLC and DBDK Venture Fund I, LP are recorded in “Loss (income) from equity method investment” on the consolidated statements of operations.

Under the equity method, the Company’s investment is initially measured at cost and subsequently increased or decreased to recognize the Company’s share of income and losses of the investee, capital contributions and distributions and impairment losses. The Company performs a qualitative assessment annually and recognizes an impairment if there are sufficient indicators that the fair value of the investment is less than carrying value. There was no such impairment recorded during 2023, 2022, or 2021.

Leases

The Company determines if an arrangement is a lease at inception and categorizes it as either operating or finance based on the criteria of ASC 842. An arrangement contains a lease when the arrangement conveys the right to control the use of an identified asset over the lease term. Operating leases are recorded in the Consolidated Balance Sheets. The Company currently does not have any finance leases. The Company elects certain practical expedients that include not separating lease and non-lease components and it does not apply the right-of-use (“ROU”) assets and lease liability recognition requirements to short-term leases.

Lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at the commencement date. These leases typically do not provide an implicit rate; therefore, the Company uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of future lease payments. The incremental borrowing rate is the rate incurred to borrow on a collateralized basis over a similar term in an amount equal to the lease payments in a similar economic environment. ROUs are recognized at the lease commencement date at the value of the lease liability, adjusted for any lease payments made prior to commencement and exclude lease incentives and initial direct costs incurred. The lease terms include all non-cancelable periods and may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense is recognized on a straight-line basis over the expected lease term.

Liabilities to Users

The Company records liabilities for user account balances and pending wagers. User account balances consist of user deposits, most promotional awards and user winnings less user withdrawals, tax withholdings and user losses. Liabilities for user account balances may be covered through a combination of cash reserved for users, receivables reserved for users and surety bonds for the benefit of users.

Loss Contingencies

The Company’s loss contingencies, which are included within accounts payable and accrued expenses or other long-term liabilities in our consolidated balance sheets, are uncertain by nature and their estimation requires significant management judgment as to the probability of loss and estimation of the amount of such loss. These contingencies include, but may not be limited to, litigation, indirect taxes, regulatory investigations and proceedings and management’s evaluation of complex laws and regulations, and the extent to which they may apply to our business and industry.

The Company regularly reviews its contingencies to determine whether the likelihood of loss is probable or reasonably possible and to assess whether a reasonable estimate of the loss can be made. Determination of whether a loss estimate can be made is a complex undertaking that considers the judgement of management, third-party research, the prospect of negotiation and interpretations by regulators and courts, among other information. When a loss is determined to be probable, and the amount of the loss can be reasonably estimated, an estimated contingent liability is recorded and the related legal costs are expensed as incurred.

Revenue Recognition

The Company records revenue in accordance with ASC Topic 606, *Revenue from Contracts with Customers* (“ASC 606”). ASC 606 requires companies to recognize revenue in a way that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the standard requires more detailed disclosures to enable readers of the financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. See Note 9 (*Revenue Recognition*) for further information.

The Company determines revenue recognition through the following steps:

- Identify the contract, or contracts, with the customer;
- Identify the performance obligations in the contract;
- Determine the transaction price;
- Allocate the transaction price to performance obligations in the contract; and
- Recognize revenue when, or as, the Company satisfies performance obligations by transferring the promised good or services.

The Company is currently engaged in the business of digital sports entertainment and gaming and provides its users with online gaming opportunities. The Company also provides online sportsbook and casino operators with technical infrastructure as well as related services with respect to its direct customers and distributors. The following is a description of the Company's revenue streams:

Online gaming

Sportsbook or sports betting involves a user wagering money on an outcome or series of outcomes occurring. When a user's wager wins, the Company pays the user a pre-determined amount known as fixed odds. Sportsbook revenue is generated by setting odds such that there is a built-in theoretical margin in each sports wagering opportunity offered to users. Sportsbook revenue is generated from users' wagers net of payouts made on users' winning wagers and incentives awarded to users.

iGaming, or online casino, typically includes digital versions of wagering games available in land-based casinos, such as blackjack, roulette and slot machines. For these product offerings, the Company functions similarly to land-based casinos, generating revenue through hold, as users play against the house. iGaming revenue is generated from user wagers net of payouts made on users' winning wagers and incentives awarded to users.

DFS is a peer-to-peer product offering in which contestants compete against one another for prizes. Contestants pay an entry fee to join a DFS contest and compete for prizes, which are distributed to the highest performing contestants in each contest as defined by each contest's prize table. DFS revenue is generated from contest entry fees from contestants, net of prizes and customer incentives awarded to contestants.

Sportsbook, iGaming, and DFS, each as described above, create a single performance obligation for the Company to operate contests or games and award prizes or payouts to users based on results. Revenue is recognized at the conclusion of each wager, wagering game hand or contest. Incentives can be used across online gaming product offerings. Additionally, certain incentives given to customers create material rights and represent separate performance obligations. User incentives in certain cases create liabilities when awarded to players and in those cases are generally recognized as revenue upon redemption.

Gaming software

The Company contracts with business customers to provide sports and casino betting software solutions. Gaming software revenue is recognized when control of the solutions is transferred to the customer in an amount that reflects the consideration to which the Company expects to be entitled to in exchange for providing control of the sports betting and casino software.

The Company's direct customer contract revenue is generally calculated as a percentage of the wagering revenue generated by the business customer using our software and is recognized in the periods in which those wagering and related activities conclude. Our direct customer arrangements do not provide the customers with the right to take possession of our software, but only the right to purchase access to the Company's sports and casino wagering software for a defined contractual period.

Media and advertising revenue

The Company enters contracts with businesses where it receives consideration in exchange for advertisement activities over the related campaign periods. These services are grouped into advertising promises and sponsored game promises. The advertising packages range from standard ad placements and background ad placements to more high-touch integrations, such as sponsored DFS contest series or custom site takeovers. Media and advertising revenue is generated from business users and recognized ratably over the respective ad periods.

Non-fungible token (“NFT”) content

The Company launched DraftKings Marketplace during the third quarter of 2021. Marketplace is a digital collectibles (non-fungible token or “NFT”) ecosystem designed for mainstream accessibility that offers curated initial NFT drops (“Primary Sales”). In addition to Primary Sales, owners of NFTs on Marketplace can list their NFTs for sale to other Marketplace customers (“Secondary Sales”). The revenue that the Company earns from Marketplace is primarily based on a specific percentage of the gross value of each Primary Sale or Secondary Sale. The revenue is recognized for each sale when the NFT transfers to the end user.

Transaction Price Considerations

Variability in the transaction price arises primarily due to market-based pricing, cash discounts, revenue sharing and usage-based fees. DraftKings offers loyalty programs, free plays, deposit bonuses, discounts, rebates and other rewards and incentives to its customers. Revenue for Sportsbook, iGaming and DFS is collected prior to the contest or event and is fixed once the outcome is known. Prizes paid and payouts made to users are recognized when awarded to the player.

Contracts with customers may include multiple performance obligations. For such arrangements, the transaction price is allocated to performance obligations on a relative standalone selling price basis. Standalone selling prices are estimated based on observable data of the Company’s sales of such products and services to similar customers and in similar circumstances on a standalone basis. For Online Gaming, which includes Sportsbook, iGaming and DFS, the Company allocates a portion of the transaction price to certain customer incentives that create material future customer rights. In addition, in the event of a multi-stage contest, the Company will allocate transaction price ratably from contest start to the contest’s final stage.

Certain costs to obtain or fulfill contracts

Under ASC 606, certain costs to obtain or fulfill a contract with a customer must be capitalized, to the extent recoverable from the associated contract margin, and subsequently amortized as the products or services are delivered to the customer. These costs are capitalized as contract acquisition costs and are amortized over the period of benefit to the customer. For the Company, the period of benefit is typically less than or equal to one year. As such, the Company applied the practical expedient and contract acquisition costs are expensed immediately. Customer contract costs which do not qualify for capitalization as contract fulfillment costs are expensed as incurred.

Contract balances

Contract assets and liabilities represent the differences in the timing of revenue recognition from the receipt of cash from the Company’s customers and billings to those customers. Contract assets reflect revenue recognized and performance obligations satisfied in advance of customer billing.

Deferred revenue primarily represents contract liabilities related to the Company’s obligation to transfer future value in relation to in-period transactions in which the Company has received consideration. Such obligations are recognized as liabilities when awarded to users and are recognized as revenue when those liabilities are later resolved. The Company maintains various programs to incentivize user behavior, which allow users to earn awards. Incentive awards generally represent a material right to the user, and awards may be redeemed for future services. Incentive awards earned by users, but not yet redeemed, are generally recognized as a reduction to revenue and included within liabilities to users on our consolidated balance sheets. When a user redeems most types of awards, the Company recognizes revenue on its consolidated statements of operations. Certain player awards are not subject to expiration or have not been expired historically; on such awards the Company recognizes breakage (for amounts not expected to be redeemed) to the extent there is no requirement for remitting such balances to regulatory agencies. In addition to these incentive programs, the Company’s deferred revenue balance also consists of wagered amounts that relate to unsettled or pending outcomes.

Cost of Revenue

Cost of revenue consists primarily of variable costs. These include mainly (i) product taxes, (ii) payment processing fees and chargebacks, (iii) platform costs directly associated with revenue-generating activities, including those costs that were originally capitalized for internally developed software, (iv) revenue share / market access arrangements, and (v) feed / provider services. The Company incurs payment processing fees on user deposits, withdrawals and deposit reversals from payment processors. Cost of revenue also includes expenses related to the distribution of our services, amortization of intangible assets and compensation of revenue associated personnel.

Sales and Marketing

Sales and marketing expenses consist primarily of expenses associated with advertising, conferences, costs related to free to play contests, rent and facilities maintenance, and the compensation of sales and marketing personnel, including stock-based compensation expenses. Advertising costs are expensed as incurred and are included in sales and marketing expense in our consolidated statements of operations. Advertising costs include those costs associated with communicating with potential customers and generally use some form of media, such as internet, radio, print, television, or billboards. Advertising costs also include costs associated with strategic league and team partnerships. During the years ended December 31, 2023, 2022 and 2021, advertising costs calculated in accordance with U.S. GAAP were \$984.4 million, \$964.9 million and \$831.1 million, respectively.

Product and Technology

Product and technology expenses consist primarily of research and development costs that are not capitalized and other costs not associated directly with revenue generating activities. Research and development costs primarily represent employee expenses (including stock-based compensation) for engineering product, design, analytical research and project management incurred for non-revenue generating activities. Other costs include related overhead for rent, facilities maintenance, third party software licenses and consulting services.

General and Administrative

General and administrative expenses consist of costs not related to sales and marketing, product and technology or revenue. General and administrative costs include professional services (including legal, regulatory, audit, accounting, lobbying and services related to acquisitions), rent and facilities maintenance, contingencies, insurance, allowance for credit losses, depreciation of leasehold improvements and furniture and fixtures and costs related to the compensation of executive and non-executive personnel, including stock-based compensation.

Benefit Plans

The Company maintains a defined contribution plan, which covers a majority of employees. The plan allows for employee salary deferrals, which are matched at our discretion. The Company contributions to these plans were \$11.6 million, \$9.3 million and \$6.7 million in 2023, 2022 and 2021, respectively.

Stock-based Compensation

The Company measures compensation cost for stock options and other stock awards in accordance with ASC 718, *Compensation—Stock Compensation*. Stock-based compensation is measured at fair value on grant date and recognized as compensation cost over the requisite service period. Generally, the Company issues stock options and other stock awards to employees with service-based or performance-based vesting conditions. For awards with only service-based vesting conditions, the Company records compensation cost for these awards using the straight-line method less an assumed forfeiture rate. For awards with performance-based vesting conditions, the Company recognizes compensation cost on a tranche-by-tranche basis (the accelerated attribution method), based on the probability of achieving the performance criteria.

Under the provisions of ASC 505-50, *Equity-Based Payments to Non-Employees*, the Company measures stock-based awards granted to non-employees at the earlier of: (i) the performance commitment date, or (ii) the date the services required under the arrangement have been completed. Compensation cost is recognized over the period during which services are rendered by non-employees until service is completed.

Income Taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined on the basis of the differences between U.S. GAAP treatment and tax treatment of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Deferred tax liabilities are included in other long-term liabilities in the consolidated balance sheets. Changes in deferred tax assets and liabilities are included in the income tax (benefit) provision in the consolidated statement of operations. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by considering taxable income of the appropriate source and character in carryback years, existing taxable temporary differences, prudent and feasible tax planning strategies and estimated future taxable profits.

The Company accounts for uncertainty in income taxes recognized in its consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then measured to determine the amount of benefit to recognize in our consolidated financial statements. Liabilities for uncertain tax positions are included in long-term income tax liabilities in the consolidated balance sheets. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The income tax (benefit) provision includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate, as well as the related net interest and penalties.

Loss per share

Basic loss per share is calculated using the two-class method. Under the two-class method, basic loss is computed by dividing net loss available to common stockholders by the weighted-average number of common shares outstanding during the period excluding the effects of any potentially dilutive instruments. The weighted-average number of common shares outstanding during the period includes Class A common stock but is exclusive of Class B common stock as these shares have no economic or participating rights. Diluted loss per share is computed similar to basic loss per share, except that the denominator is increased to include the number of additional common shares that would have been outstanding if potential common shares had been issued if such additional common shares were dilutive. Since the Company had net losses for all the periods presented, basic and diluted loss per share are the same, and additional potential common shares have been excluded, as their effect would be anti-dilutive.

Recently Issued Accounting Pronouncements Not Yet Adopted

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions* ("ASU 2022-03"), which clarifies the guidance in Accounting Standards Codification Topic 820, Fair Value Measurement ("Topic 820"), when measuring the fair value of an equity security subject to contractual restrictions that prohibit the sale of an equity security and introduces new disclosure requirements for equity securities subject to contractual sale restrictions that are measured at fair value in accordance with Topic 820. ASU 2022-03 is effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years, and early adoption is permitted. While the Company is continuing to assess the potential impacts of ASU 2022-03, it does not expect ASU 2022-03 to have a material effect on the Company's consolidated financial condition, results of operations or cash flows.

In November 2023, the FASB issued ASU 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*, to improve reportable segment disclosures. The guidance expands the disclosures required for reportable segments in our annual and interim consolidated financial statements, primarily through enhanced disclosures about significant segment expenses. The standard will be effective for us beginning with our annual reporting for fiscal year 2024 and interim periods thereafter, with early adoption permitted. We are currently evaluating the impact of this standard on our segment disclosures.

In December 2023, the FASB issued ASU 2023-08, *Accounting for and Disclosure of Crypto Assets (Topic 820)*, a new standard designed to enhance decision-useful information about such assets and to better reflect the underlying economics of cryptocurrency transactions. The standard will be effective for us beginning with our annual reporting for fiscal year 2025 and interim periods thereafter, with early adoption permitted. We are currently evaluating the impact of this standard on our digital assets' accounting and disclosures.

In December 2023, the FASB issued ASU 2023-09, Income Taxes—Income Taxes (Topic 740): Improvements to Income Tax Disclosures (“ASU 2023-09”). ASU 2023-09 modifies the rules on income tax disclosures to enhance the transparency and decision-usefulness of income tax disclosures, particularly in the rate reconciliation table and disclosures about income taxes paid. The amendments are intended to address investors’ requests for income tax disclosures that provide more information to help them better understand an entity’s exposure to potential changes in tax laws and the ensuing risks and opportunities and to assess income tax information that affects cash flow forecasts and capital allocation decisions. The guidance also eliminates certain existing disclosure requirements related to uncertain tax positions and unrecognized deferred tax liabilities. ASU 2023-09 is effective for public business entities for annual periods beginning after December 15, 2024. All entities are required to apply the guidance prospectively but have the option to apply it retrospectively. Early adoption is permitted. The Company is continuing to assess the timing of adoption and the potential impacts of ASC 2023-09.

3. Business Combinations

Acquisition of Golden Nugget Online Gaming, Inc.

On May 5, 2022, DraftKings consummated the GNOG Transaction, and, under the terms of the GNOG Merger Agreement and subject to certain exclusions contained therein, GNOG stockholders received a fixed ratio of 0.365 shares of DraftKings Inc.’s Class A common stock for each share of GNOG that they held on the GNOG Closing Date. DraftKings Inc. issued approximately 29.3 million shares of its Class A common stock in connection with the consummation of the GNOG Transaction.

Operating results for GNOG on and after the GNOG Closing Date are included in the Company’s consolidated statements of operations for the years ended December 31, 2023 and 2022. Because the Company is integrating GNOG’s operations into its consolidated operating activities, the amount of revenue and earnings attributable to the GNOG business for 2022, which is included within revenue and net loss attributable to common stockholders in the Company’s consolidated statements of operations, was impracticable to determine.

Purchase Price Accounting for the GNOG Transaction

On the GNOG Closing Date, the Company acquired 100% of the equity interests of GNOG pursuant to the GNOG Merger Agreement. The following is a summary of the consideration issued on the GNOG Closing Date:

Share consideration ⁽¹⁾	\$	460,128
Other consideration ⁽²⁾		143,337
Total consideration	\$	603,465

(1) Includes the issuance of approximately 29.3 million shares of DraftKings Inc.’s Class A common stock issued at a price of \$15.73.

(2) Includes (i) \$170.9 million of payments made by the Company on behalf of GNOG, including repayment of the outstanding portion of GNOG’s term loan (including the associated prepayment premium) and payment of certain of GNOG’s transaction expenses incurred in connection with the GNOG Transaction and (ii) warrants that were exercisable for shares of GNOG Class A common stock prior to the GNOG Closing Date, which were assumed by DraftKings in connection with the GNOG Transaction and became eligible to be converted into approximately 2.1 million shares of DraftKings Inc.’s Class A common stock in the aggregate. These payments were partially offset by commercial credits received by the Company from Fertitta Entertainment, Inc. (“FEI”), which can be applied by the Company from time to time to offset future amounts otherwise owed by it to FEI or its affiliates under commercial arrangements among such parties, subject to certain limited exceptions.

The following table summarizes the consideration issued or paid in connection with the GNOG Transaction and the fair value of the assets acquired and liabilities assumed in connection with the consummation of the GNOG Transaction on the GNOG Closing Date:

Cash and cash equivalents	\$	66,709
Cash reserved for users		7,633
Receivables reserved for users		2,814
Accounts receivables		7,783
Prepaid expenses and other current assets		64
Property and equipment, net		1,433
Intangible assets, net		315,000
Operating lease right-of-use assets		1,185
Deposits and other non-current assets		47,395
Total identifiable assets acquired		450,016
Liabilities assumed:		
Accounts payable and accrued expenses		32,989
Liabilities to users		4,314
Operating lease liabilities		1,185
Other long-term liabilities		78,781
Total liabilities assumed		117,269
Net assets acquired (a)		332,747
Purchase consideration (b)		603,465
Goodwill (b) – (a)	\$	270,718

Goodwill represents the excess of the gross consideration transferred over the difference between the fair value of the underlying net assets acquired and the underlying liabilities assumed. Qualitative factors that contribute to the recognition of goodwill include certain intangible assets that are not recognized as separate identifiable intangible assets apart from goodwill. Intangible assets not recognized apart from goodwill consist primarily of benefits from securing buyer-specific synergies that increase revenue and profits and are not otherwise available to a market participant, as well as acquiring a talented workforce and cost savings opportunities. Goodwill recognized is partially deductible for tax purposes, and the amount of deductible goodwill was determined to be \$160.7 million.

Intangible Assets

	Fair Value	Weighted-Average Useful Life
Gaming licenses	\$ 145,000	12.2 years
Customer relationships	170,000	5.9 years
Total	\$ 315,000	

Loan Receivable

The Company acquired a long-term receivable in the amount of \$30.1 million in connection with the GNOG Transaction, which originally resulted from a \$30.0 million mezzanine loan (the “Danville GN Casino Loan”) by GNOG to certain parties before the GNOG Closing Date to develop and construct a “Golden Nugget”-branded casino in Danville, Illinois, pending regulatory approvals, that would enable GNOG to obtain market access to the State of Illinois. There has been no significant deterioration of credit quality since the origination date of the Danville GN Casino Loan. The receivable related to the Danville GN Casino Loan is classified within deposits and other non-current assets on the Company’s consolidated balance sheet.

Transaction Costs

For the year ended December 31, 2022 and 2021, the Company incurred \$14.9 million and \$9.2 million, respectively, in advisory, legal, accounting and management fees in connection with the GNOG Transaction, which are included in general and administrative expenses on the Company's consolidated statements of operations.

Unaudited Pro-Forma Information

The financial information in the table below summarizes the combined results of operations of Old DraftKings and GNOG, on an actual and a pro forma basis, as applicable, as though the companies had been combined as of January 1, 2021. The pro forma financial information is presented for informational purposes only and is not indicative of the results of operations that would have been achieved if the GNOG Transaction had been consummated as of the beginning of the periods presented or of results that may occur in the future.

	Year Ended December 31,			
	2022 Pro Forma		2021 Pro Forma	
Revenue	\$	2,284,596	\$	1,417,011
Net loss	\$	(1,375,161)	\$	(1,660,125)

The foregoing pro forma financial information is based on estimates and assumptions, which the Company believes are reasonable. The pro forma financial information includes adjustments primarily related to purchase accounting adjustments. Transaction costs and other non-recurring charges incurred are included in the earliest period presented.

Vegas Sports Information Network, Inc. Acquisition

On March 26, 2021, the Company acquired 100% of the equity of Vegas Sports Information Network, Inc. ("VSiN" and such acquisition, the "VSiN Acquisition") for \$40.6 million of cash and approximately \$29.4 million of the Company's Class A common stock.

The acquired assets and assumed liabilities of VSiN were recorded at their estimated fair values, including \$21.8 million of intangible assets. Goodwill of \$47.2 million represents the excess of the gross considerations transferred over the fair value of the underlying net assets acquired and liabilities assumed. Goodwill associated with the VSiN Acquisition is assigned as of the acquisition date to the Company's Media reporting unit. The purchase price allocation for the VSiN Acquisition was finalized as of December 31, 2021. Goodwill recognized is not deductible for tax purposes. As VSiN's financial results are not material to the Company's consolidated financial statements, the Company has elected to not include pro forma results.

Blue Ribbon Software Ltd. Acquisition

On April 1, 2021, the Company acquired 100% of the equity of Blue Ribbon Software Ltd. ("Blue Ribbon") for \$17.8 million of cash and approximately \$3.8 million of the Company's Class A common stock (the "Blue Ribbon Acquisition"). The acquired assets and assumed liabilities of Blue Ribbon were recorded at their estimated fair values. The purchase price allocation for the Blue Ribbon Acquisition was finalized as of December 31, 2021.

4. Property and Equipment

Property and equipment, net consists of the following:

	December 31, 2023	December 31, 2022
Computer equipment and software	\$ 70,243	\$ 64,133
Furniture and fixtures	8,594	8,526
Leasehold improvements	57,309	43,046
Property and Equipment	136,146	115,705
Accumulated depreciation	(75,451)	(55,603)
Property and Equipment, net	\$ 60,695	\$ 60,102

During the years ended December 31, 2023, 2022, and 2021 the Company recorded depreciation expense on property and equipment of \$20.4 million, \$18.7 million, and \$13.8 million, respectively. The value of property and equipment, net in foreign countries is \$4.0 million.

5. Intangible Assets and Goodwill

Intangible Assets

As of December 31, 2023, intangible assets, net consists of the following:

	Weighted-Average Remaining Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net
Amortized intangible assets:				
Developed technology	4.4 years	\$ 422,900	\$ (193,247)	\$ 229,653
Internally developed software	2.3 years	236,644	(108,169)	128,475
Gaming licenses	10.6 years	218,760	(47,941)	170,819
Customer relationships	4.1 years	269,728	(127,862)	141,866
Trademarks, tradenames and other	3.3 years	37,674	(20,751)	16,923
		1,185,706	(497,970)	687,736
Indefinite-lived intangible assets:				
Digital assets, net of impairment	Indefinite-lived	2,884	N/A	2,884
Intangible assets, net		\$ 1,188,590	\$ (497,970)	\$ 690,620

As of December 31, 2022, intangible assets, net consisted of the following:

	Weighted-Average Remaining Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net
Developed technology	5.4 years	\$ 422,900	\$ (140,200)	\$ 282,700
Internally developed software	2.4 years	168,277	(70,575)	97,702
Gaming licenses	11.0 years	206,655	(29,487)	177,168
Customer relationships	4.6 years	269,728	(75,791)	193,937
Trademarks and tradenames	3.8 years	36,193	(13,463)	22,730
		1,103,753	(329,516)	774,237
Indefinite-lived intangible assets:				
Digital assets, net of impairment	Indefinite-lived	2,697	—	2,697
Intangible assets, net		\$ 1,106,450	\$ (329,516)	\$ 776,934

During the years ended December 31, 2023, 2022, and 2021 the Company recorded amortization expense on intangible assets of \$180.9 million, \$150.6 million, and \$107.3 million, respectively. Future cash flows associated with the Company's intangible assets are not expected to be materially affected by its ability to renew or extend its arrangements.

The table below shows expected amortization expense for the next five years of intangible assets recorded as of December 31, 2023:

Year ending December 31,	Estimated Amortization
2024	\$ 186,620
2025	144,810
2026	107,560
2027	84,078
2028	47,058

Goodwill

There were no changes in the carrying amount of goodwill for the year ended December 31, 2023. As of December 31, 2023, the Company had no accumulated goodwill impairment losses.

	Total
Balance as of December 31, 2021	\$ 615,65
Goodwill resulting from acquisitions	270,71
Balance as of December 31, 2022	\$ 886,37
Changes in Goodwill	-
Balance as of December 31, 2023	\$ 886,37

No impairment of goodwill was recorded in the years ended December 31, 2023, 2022 and 2021. As of December 31, 2023, the Company had no accumulated goodwill impairment losses.

6. Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses consist of the following:

	December 31, 2023	December 31, 2022
Accounts payable	\$ 34,127	\$ 10,148
Accrued compensation and related expenses	94,830	78,819
Accrued marketing	100,840	146,569
Accrued partnership fees	136,338	99,633
Accrued processor fees	21,357	14,440
Accrued product taxes	116,501	70,891
Accrued professional fees and litigation	53,870	23,151
Accrued software and license fees	25,829	12,558
Deferred revenue	43,634	40,520
Accrued other expenses	12,273	20,858
Total	\$ 639,599	\$ 517,587

7. Current and Long-term Liabilities

Revolving Line of Credit

On December 20, 2022, the Company entered into a loan and security agreement with Pacific Western Bank and Citizens Bank, as lenders (as amended, the “Credit Agreement”), which provides the Company with a revolving line of credit of up to \$125.0 million (the “Revolving Line of Credit”). The Credit Agreement has a maturity date of December 20, 2024 and replaced the Company’s amended and restated loan and security agreement entered into with Pacific Western Bank in October 2016 (the “Prior Credit Agreement”), which provided a revolving line of credit of up to \$60.0 million and was terminated in connection with the Company’s entry into the Credit Agreement.

Borrowings under the Credit Agreement bear interest at a variable annual rate equal to the greater of (i) 1.00% above the prime rate then in effect and (ii) 5.00%, and the Credit Agreement requires monthly, interest-only payments on any outstanding borrowings. In addition, the Company is required to pay quarterly in arrears a commitment fee equal to 0.25% per annum of the unused portion of the Revolving Line of Credit. As of December 31, 2023, the Credit Agreement provided a revolving line of credit of up to \$125.0 million, and there was no principal outstanding under the Credit Agreement. Net borrowing capacity available from the Credit Agreement as of December 31, 2023 totaled \$122.7 million. The Company is also subject to certain affirmative and negative covenants, including the restriction of dividends, under the Credit Agreement which it is in compliance with as of December 31, 2023. One such covenant involves maintaining compensating cash balances. The compensating balances may be withdrawn but the availability of the line of credit is dependent upon maintenance of such compensating balances. The performance of the Company’s obligations under the Credit Agreement are secured by a first-priority security interest on substantially all of its assets.

Convertible Notes and Capped Call

In March 2021, Old DraftKings issued zero-coupon convertible senior notes in an aggregate principal amount of \$1,265.0 million, which includes proceeds from the full exercise of the over-allotment option (collectively, the “Convertible Notes”). The Convertible Notes will mature on March 15, 2028 (the “Notes Maturity Date”), subject to earlier conversion, redemption or repurchase. In connection with the issuance of the Convertible Notes, Old DraftKings incurred \$17.0 million of lender fees and \$1.7 million of debt financing costs, which are being amortized through the Notes Maturity Date. The Convertible Notes represent senior unsecured obligations of Old DraftKings, which are being amortized through the Notes Maturity Date. On May 5, 2022, in connection with the consummation of the GNOG Transaction, (i) DraftKings Inc. agreed to fully and unconditionally guarantee all of Old DraftKings’ obligations under the Convertible Notes and the indenture governing the Convertible Notes and (ii) each Convertible Note which was outstanding as of the consummation of the GNOG Transaction and previously convertible into shares of Old DraftKings Class A common stock became convertible into shares of DraftKings Inc. Class A common stock.

The Convertible Notes are convertible at an initial conversion rate of 10.543 shares of DraftKings Inc.’s Class A common stock per \$1,000 principal amount of Convertible Notes, which is equivalent to an initial conversion price of approximately \$94.85 per share of DraftKings Inc.’s Class A common stock. The conversion rate is subject to adjustment upon the occurrence of certain specified events and includes a make-whole adjustment upon early conversion in connection with a make-whole fundamental change (as defined in the indenture governing the Convertible Notes). For the years ended December 31, 2023, 2022 and 2021 there were no changes to the initial conversion price.

Prior to September 15, 2027, the Convertible Notes will be convertible by the holder only upon satisfaction of certain conditions and during certain periods, and thereafter, at any time until the close of business on the second scheduled trading day immediately preceding the Notes Maturity Date. Old DraftKings will satisfy any conversion election by paying or delivering, as the case may be, cash, shares of DraftKings Inc.’s Class A common stock or a combination of cash and shares of DraftKings Inc.’s Class A common stock. During 2022, the conditions allowing holders of the Convertible Notes to convert their Convertible Notes were triggered by the holding company reorganization in connection with the GNOG Transaction, whereby DraftKings Inc. became the going-forward public company and replaced Old DraftKings as the issuer of the Class A common stock issuable upon conversion of the Convertible Notes; such conversion window expired on June 27, 2022, and no holders of the Convertible Notes exercised their conversion rights. As of December 31, 2023, no conditions were met to allow for the conversion of the Convertible Notes by any holder.

In connection with the pricing of the Convertible Notes and the exercise of the over-allotment option to purchase additional notes, Old DraftKings entered into a privately negotiated capped call transaction (“Capped Call Transactions”). The Capped Call Transactions have a strike price of \$94.85 per share, subject to certain adjustments, which corresponds to the initial conversion price of the Convertible Notes. The Capped Call Transactions have an initial cap price of \$135.50 per share, subject to certain adjustments. The Capped Call Transactions are expected generally to reduce potential dilution to DraftKings Inc.’s Class A common stock upon any conversion of Convertible Notes. As the transaction qualifies for equity classification, the net

cost of \$124.0 million incurred in connection with the Capped Call Transactions was recorded as a reduction to additional paid-in capital on the Company's consolidated balance sheet.

As of December 31, 2023, the Company's convertible debt balance was \$1,253.8 million, net of unamortized debt issuance costs of \$11.2 million. The amortization of debt issuance costs were \$2.7 million, \$2.7 million and \$2.1 million in 2023, 2022 and 2021, respectively, and these costs are included in the interest expense line-item on the Company's consolidated statements of operations. Although recorded at amortized cost on the Company's consolidated balance sheets, the estimated fair value of the Convertible Notes was \$1,025.6 million and \$786.5 million as of December 31, 2023 and 2022, respectively, which was calculated using the estimated or actual bids and offers of the Convertible Notes in an over-the-counter market on the last business day of the period, which is a Level 1 fair value measurement.

Indirect Taxes

Taxation of e-commerce is becoming more prevalent and could negatively affect the Company's business as it primarily pertains to DFS and its contestants. The ultimate impact of indirect taxes on the Company's business is uncertain, as is the period required to resolve this uncertainty. The Company's estimated contingent liability for indirect taxes represents the Company's best estimate of tax liability in jurisdictions in which the Company believes taxation is probable. The Company frequently reevaluates its tax positions for appropriateness.

Indirect tax statutes and regulations are complex and subject to differences in application and interpretation. Tax authorities may impose indirect taxes on Internet-delivered activities based on statutes and regulations which, in some cases, were established prior to the advent of the Internet and do not apply with certainty to the Company's business. The Company's estimated contingent liability for indirect taxes may be materially impacted by future audit results, litigation and settlements, should they occur. The Company's activities by jurisdiction may vary from period to period, which could result in differences in the applicability of indirect taxes from period to period.

As of December 31, 2023, and December 31, 2022, the Company's estimated contingent liability for indirect taxes was \$71.2 million and \$60.3 million, respectively. The estimated contingent liability for indirect taxes is recorded within other long-term liabilities on our consolidated balance sheets and general and administrative expenses on our consolidated statements of operations.

Warrant Liabilities

As part of the initial public offering of Diamond Eagle Acquisition Corp. ("DEAC") on May 14, 2019 (the "IPO"), DEAC issued 13.3 million warrants, each of which entitles the holder to purchase one share of DraftKings Inc.'s Class A common stock at an exercise price of \$11.50 per share (the "Public Warrants"). Simultaneously with the closing of the IPO, DEAC completed the private sale of 6.3 million warrants to DEAC's sponsor (the "Private Warrants") where each whole warrant entitles the holder to purchase one share of DraftKings Inc.'s Class A common stock at an exercise price of \$11.50 per share. As of December 31, 2023, there were no Public Warrants outstanding and 1.4 million Private Warrants outstanding. As of December 31, 2022, there were no Public Warrants outstanding and 1.6 million Private Warrants outstanding. On May 5, 2022, in connection with the consummation of the GNOG Transaction, Old DraftKings entered into an assignment and assumption agreement (the "Old DraftKings Warrant Assignment Agreement") with DraftKings Inc., Computershare Trust Company, N.A. and Computershare Inc. (together, "Computershare"), pursuant to which Old DraftKings assigned to DraftKings Inc. all of its rights, interests and obligations under the warrant agreement, dated as of May 10, 2019 (the "Old DraftKings Warrant Agreement"), by and between DEAC and Continental Stock Transfer & Trust Company, as warrant agent, as assumed by Old DraftKings and assigned to Computershare by that certain assignment and assumption agreement, dated as of April 23, 2020, governing Old DraftKings' outstanding Private Warrants, on the terms and conditions set forth in the Old DraftKings Warrant Assignment Agreement. In connection with the consummation of the GNOG Transaction and pursuant to the Old DraftKings Warrant Assignment Agreement, each of the outstanding Private Warrants became exercisable for one share of DraftKings Inc. Class A common stock on the existing terms and conditions, except as otherwise described in the Old DraftKings Warrant Assignment Agreement.

In addition, on May 5, 2022, in connection with the consummation of the GNOG Transaction, the Company assumed an additional 5.9 million warrants, each of which entitled the holder to purchase one share of GNOG's Class A common stock at an exercise price of \$11.50 per share (the "GNOG Private Warrants"). Effective as of the consummation of the GNOG Transaction, each of the outstanding GNOG Private Warrants became exercisable, at a price of \$31.50, for 0.365 of a share of DraftKings Inc.'s Class A common stock, or approximately 2.1 million shares of DraftKings Inc.'s Class A common stock in the aggregate, on the existing terms and conditions of such GNOG Private Warrants, except as otherwise described in the assignment and assumption agreement relating to the GNOG Private Warrants entered into on the GNOG Closing Date.

The Company classified its Public Warrants, Private Warrants and GNOG Private Warrants pursuant to ASC 815 as derivative liabilities with subsequent changes in their respective fair values recognized in its consolidated statement of operations at each reporting date. As of December 31, 2023 and 2022, there were 5.9 million GNOG Private Warrants outstanding.

As of December 31, 2023, the fair value of the Company's warrant liability was \$63.6 million. Due to fair value changes throughout 2023, the Company recorded a loss on remeasurement of warrant liabilities of \$57.5 million and throughout 2022 and 2021, the Company recorded a gain on remeasurement of warrant liabilities of \$29.4 million and \$30.1 million, respectively. In 2023, 0.2 million Private Warrants were exercised resulting in a reclassification to additional paid-in-capital in the amount of \$4.6 million, and no GNOG Private Warrants were exercised. In 2022, a de minimis number of Private Warrants and no GNOG Private Warrants were exercised. In 2021, 0.3 million Private Warrants were exercised, resulting in a reclassification to additional paid-in-capital in the amount of \$9.2 million. See Note 8 (*Fair Value Measurements*) and Note 13 (*Loss Per Share*) for further information on the Company's warrant liabilities.

8. Fair Value Measurements

Certain assets and liabilities are carried at fair value under U.S. GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value and nonrecurring fair value measurements are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The following tables set forth the fair value of the Company's financial assets and liabilities measured at fair value as of December 31, 2023 and 2022 based on the three-tier fair value hierarchy:

	December 31, 2023			
	Level 1	Level 2	Level 3	Total
Assets				
Cash equivalents:				
Money market funds	\$ 250,055 ⁽¹⁾	\$ —	\$ —	\$ 250,055
Other current assets:				
Digital assets held for users	—	46,624 ⁽²⁾	—	46,624
Other non-current assets:				
Derivative instruments	—	—	19,999 ⁽⁵⁾	19,999
Equity securities	—	13,533 ⁽⁴⁾	—	13,533
Total	\$ 250,055	\$ 60,157	\$ 19,999	\$ 330,211

Liabilities				
Other current liabilities:				
Digital assets held for users	\$ —	\$ 46,624 ⁽²⁾	\$ —	\$ 46,624
Warrant liabilities	—	63,568 ⁽⁶⁾	—	63,568
Total	\$ —	\$ 110,192	\$ —	\$ 110,192

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
Assets				
Cash equivalents:				
Money market funds	\$ 304,216 ⁽¹⁾	\$ —	\$ —	\$ 304,216
Other current assets:				
Digital assets held for users	—	38,444 ⁽²⁾	—	38,444
Other non-current assets:				
Derivative instruments	—	—	26,248 ⁽⁵⁾	26,248
Equity securities	18,250 ⁽³⁾	13,533 ⁽⁴⁾	—	31,783
Total	\$ 322,466	\$ 51,977	\$ 26,248	\$ 400,691

Liabilities				
Other current liabilities:				
Digital assets held for users	\$ —	\$ 38,444 ⁽²⁾	\$ —	\$ 38,444
Warrant liabilities	—	10,680 ⁽⁶⁾	—	10,680
Total	\$ —	\$ 49,124	\$ —	\$ 49,124

(1) Represents the Company's money market funds, which are classified as Level 1 because the Company measures these assets to fair value using quoted market prices.

(2) Represents the asset and liability balance for the digital assets held by the Company for its users, which are classified as Level 2 because the Company measures these digital assets to fair value using latest transaction price for similar transactions.

(3) Represents the Company's marketable equity securities, which are classified as Level 1 because the Company measures these assets to fair value using quoted market prices.

(4) Represents the Company's non-marketable equity securities, which are classified as Level 2 because the Company measures these assets to fair value using observable inputs for similar investments of the same issuer. The Company has elected the remeasurement alternative for these assets.

(5) Represents the Company's derivative instruments held in other public and privately held entities. The Company measures these derivative instruments to fair value using option pricing models and, accordingly, classifies these assets as Level 3.

For the year ended December 31, 2023, the Company sold Level 3 derivative instruments with a fair value at December 31, 2022 of \$6.3 million for proceeds of \$5.2 million and recorded loss of \$0.1 million related to this sale. There were no new Level 3 derivative instruments purchased by or issued to the Company for the year ended December 31, 2023. During 2022, the Company did not purchase or issue a significant amount of new derivative instruments. The table below includes a range and an average weighted by relative fair value of the significant unobservable inputs used to measure these Level 3 derivative instruments to fair value. A change in these significant unobservable inputs might result in a significantly higher or lower fair value measurement at the reporting date. Changes to fair value of these instruments are recorded in Other (loss) income, net on the consolidated statements of operations and Loss (gain) on marketable equity securities and other financial assets, net in the consolidated statement of cash flows.

Significant Unobservable Input of Level 3 Investments	December 31, 2023	December 31, 2022
	Range (Weighted Average)	Range (Weighted Average)
	(amounts in dollars)	(amounts in dollars)
Underlying stock price of Level 3 investments	\$12.79 - \$19.80 (\$19.41)	\$7.30 - \$19.80 (\$16.53)
Volatility of Level 3 investments	75.0% - 80.0% (79.7%)	56.0% - 80.0% (74.1%)
Risk-free rate of Level 3 investments	1.3% - 4.2% (4.0%)	1.3% - 4.3% (4.1%)

- (6) The Company measures its Private Warrants and the GNOG Private Warrants to fair value using a binomial lattice model or a Black-Scholes model, where appropriate, with the significant assumptions being observable inputs and, accordingly, classifies these liabilities as Level 2. Key assumptions used in the valuation of the Private Warrants and GNOG Private Warrants include term, risk free rate and volatility. See Note 7 Current and Long-term Liabilities and Note 13 Loss Per Share for further information on the Company's warrant liabilities.

During 2022, the Company recorded an unrealized gain of \$19.9 million in the aggregate for its Level 3 financial assets. The Company did not record any unrealized gains or losses for its Level 3 financial assets during 2023 or 2021.

9. Revenue Recognition

Deferred Revenue

The Company included deferred revenue within accounts payable and accrued expenses and liabilities to users in the consolidated balance sheets. The deferred revenue balances were as follows:

	Year Ended December 31,			
	2023	2022	2021	
Deferred revenue, beginning of the period	\$ 133,851	\$ 91,554	\$ 30,627	
Deferred revenue, end of the period	\$ 174,212	\$ 133,851	\$ 91,554	
Revenue recognized in the period from amounts included in deferred revenue at the beginning of the period	\$ 129,246	\$ 74,837	\$ 28,319	

Deferred revenue primarily represents contract liabilities related to the Company's obligation to transfer future value in relation to in period transactions in which the Company has received consideration. These obligations are primarily related to incentive programs and wagered amounts associated with unsettled or pending outcomes that fluctuate based on volume of activity. Such obligations are recognized as liabilities when awarded to users and are recognized as revenue when those liabilities are later resolved, often within the following year.

Revenue Disaggregation

Disaggregation of revenue for years ended December 31, 2023, 2022 and 2021 are as follows:

	Year Ended December 31,		
	2023	2022	2021
Online gaming	\$ 3,557,191	\$ 2,106,708	\$ 1,145,539
Gaming software	29,980	43,000	97,415
Other	78,222	90,753	53,071
Total Revenue	\$ 3,665,393	\$ 2,240,461	\$ 1,296,025

Online gaming includes online Sportsbook, iGaming, and DFS, which have certain similar attributes and patterns of recognition. Other revenue primarily includes media, retail sportsbooks and other consumer product offerings. The opening and closing balances of the Company's accounts receivable from contracts with customers were \$51.1 million and \$47.5 million, respectively, for the year ended December 31, 2023, \$45.8 million and \$51.1 million, respectively, for the year ended December 31, 2022, and \$44.5 million and \$45.8 million, respectively, for the year ended December 31, 2021.

The following table presents the Company's revenue by geographic region for the periods indicated:

	Year Ended December 31,		
	2023	2022	2021
United States	\$ 3,595,622	\$ 2,196,803	\$ 1,198,748
International	69,771	43,658	97,277
Total Revenue	\$ 3,665,393	\$ 2,240,461	\$ 1,296,025

10. Stockholders' Equity (Deficit)

Class A Common Stock

Holders of Class A common stock are entitled to cast one vote per share of Class A common stock. Holders of Class A common stock are not entitled to cumulate their votes in the election of directors. Holders of Class A common stock will share ratably (based on the number of shares of Class A common stock held) if and when any dividend is declared by the Board out of funds legally available therefor, subject to restrictions, whether statutory or contractual (including with respect to any outstanding indebtedness), on the declaration and payment of dividends and to any restrictions on the payment of dividends imposed by the terms of any outstanding preferred stock or any class or series of stock having a preference over, or the right to participate with, the Class A common stock with respect to the payment of dividends. On the liquidation, dissolution, distribution of assets or winding up of DraftKings, each holder of Class A common stock will be entitled, pro rata on a per share basis, to all assets of DraftKings of whatever kind available for distribution to the holders of common stock, subject to the designations, preferences, limitations, restrictions and relative rights of any other class or series of preferred stock of DraftKings then outstanding.

Class B Common Stock

Shares of Class B common stock may be issued only to, and registered in the name of, Mr. Robins and any entities wholly owned by Mr. Robins (including all subsequent successors, assigns and permitted transferees). Holders of Class B common stock are entitled to cast 10 votes per share of Class B common stock. Holders of Class B common stock are not entitled to cumulate their votes in the election of directors. Holders of Class B common stock will not participate in any dividend declared by the Board. On the liquidation, dissolution, distribution of assets or winding up of DraftKings, holders of Class B common stock will not be entitled to receive any distribution of DraftKings assets of whatever kind available until distribution has first been made to all holders of Class A common stock. Notwithstanding this, due to the liquidation rights of holders of Class A common stock described above in which all assets of DraftKings of whatever kind available will be distributed to holders of Class A common stock, no assets of DraftKings will be available for liquidating distributions in respect of Class B common stock.

Preferred Stock

The Company's amended and restated articles of incorporation provide that its Board has the authority, without action by the stockholders, to designate and issue shares of preferred stock in one or more classes or series, and the number of shares

constituting any such class or series, and to fix the voting powers, designations, preferences, limitations, restrictions and relative rights of each class or series of preferred stock, including, without limitation, dividend rights, dividend rates, conversion rights, exchange rights, voting rights, rights and terms of redemption, dissolution preferences, and treatment in the case of a merger, business combination transaction, or sale of its assets, which rights may be greater than the rights of the holders of the common stock. As of December 31, 2023, the Company had 300.0 million shares authorized of preferred stock, \$0.0001 par value, of which none were issued and outstanding as of December 31, 2023 or December 31, 2022.

11. Stock-Based Compensation

In 2012, the Company's board of directors adopted the 2012 Stock Option and Restricted Stock Incentive Plan (the "2012 Plan"), which provides for the granting of incentive and nonqualified stock options, shares of restricted stock and other equity interests or awards in the Company. The Company only issued time-based vesting awards under the 2012 Plan.

In 2017, the Company's board of directors approved the 2017 Equity Incentive Plan (the "2017 Plan"). No new awards have been issued under the 2012 Plan following the approval of the 2017 Plan. The 2017 Plan provides for the granting of incentive and nonqualified stock options, shares of restricted stock and other equity interests or awards in the Company. The Company issued time-based and performance-based vesting awards under the 2017 Plan.

In 2020, the Company's board of directors approved the 2020 Incentive Award Plan (the "2020 Plan", together with the 2012 Plan and the 2017 Plan, the "Plans"). The 2020 Plan provides for the granting of incentive and nonqualified stock options, restricted stock units ("RSUs") and other equity interests or awards in the Company. As of December 31, 2023, the total number of shares available for issuance under the 2020 Plan was 10.1 million shares. There are 10.4 million shares available for issuance under the 2017 Plan, however, we no longer issue awards under the 2017 Plan. There are no securities remaining available for future issuance under the 2012 Plan as this plan has expired pursuant to the terms. The Company issued time-based and performance-based vesting awards under the 2020 Plan. As of December 31, 2023, a share reserve established that the aggregate number of shares may not exceed 900.0 million shares under the Plans.

The Company has historically issued three types of stock-based compensation: time-based awards, long term incentive plan ("LTIP") awards and performance-based stock compensation plan ("PSP") awards. Time-based awards are equity awards that tie vesting to length of service with the Company. LTIP awards are performance-based equity awards that are used to establish longer-term performance objectives and incentivize management to meet those objectives. PSP awards are performance-based equity awards which establish performance objectives related to one or two particular fiscal years. As applicable, certain stock-based compensation awards expire seven to ten years after the grant date.

Time-based awards generally vest over a four-year period in annual and/or quarterly installments and, as applicable, expire no later than ten years from the date of grant. Time-based options are valued using the Black-Scholes option-pricing model with the assumptions noted in the table below. Shares issued from the exercise of options are issued from the available Class A shares available under the Plans. The fair value of time-based RSUs is estimated on the grant date using the underlying share price.

LTIP awards that were granted as RSUs subsequent to 2020 vest based on long-term revenue targets and used the underlying share price on the grant date to estimate their fair value. On and after November 2, 2022, certain DraftKings executives agreed to delay vesting of the third tranche of their restricted stock units granted under a long-term incentive plan and to add a service condition through an extended vesting date. This modification impacts the issuance of approximately 4 million shares of DraftKings Inc.'s Class A common stock, which vested approximately ten months after the performance condition was met.

PSP awards granted in 2023 and 2022 vest based on achievement of revenue and Adjusted EBITDA targets and have a range of payouts from 0% to 200%. PSP awards granted in 2021 and 2020 vest based on achievement of revenue targets and have a range of payouts from 0% to 300%. As these awards are performance-based RSUs, the fair value is estimated on the grant date using the underlying share price.

The fair value of each option is estimated on the grant date using the Black-Scholes option-pricing model and the assumptions noted in the table below. The fair value is recognized over the requisite service period of the awards, which is generally the vesting period. For awards with only service-based vesting conditions, the Company recognizes compensation cost using the straight-line method. Expected volatility is based on an average volatility for a representative sample of

comparable public companies, including the Company. Stock options are generally granted with an exercise price equal to the fair value of the common stock at the grant date with a 10-year contractual term.

The expected term represents the period of time that the options are expected to be outstanding. The Company uses the simplified method as prescribed by the Securities and Exchange Commission Staff Accounting Bulletin No. 107, Share-Based Payment, to calculate the expected term for options granted, whereby, the expected term equals the average of the vesting term and the original contractual term of the options. The Company uses the simplified method because it does not have sufficient historical option exercise data to provide a reasonable basis upon which to estimate expected term. The risk-free interest rate is estimated using the rate of return on U.S. treasury notes with a life that approximates the expected life of the option. The fair value of the stock options issued was measured using the following assumptions:

	Year ended December 31,			
	2023	2022	2021	
Risk free interest rate	4.1 %	3.1 %	1.1 %	
Expected term (in years)	5.9	5.6	5.8	
Expected volatility	55.7 %	53.0 %	43.0 %	
Expected dividend yield	0.0 %	0.0 %	0.0 %	

The following table shows stock award activity for the years ended December 31, 2023 and 2022:

	Time-based		PSP		LTIP		Total	Weighted Average Exercise Price of Options	Weighted Average FMV of RSUs	Weighted Average Remaining Term of Options (Years)	Aggregate Intrinsic Value of Options
	Options	RSUs	Options	RSUs	Options	RSUs					
Outstanding at December 31, 2021	14,695	4,195	2,354	1,488	11,671	19,343	53,746	\$ 5.46	\$ 49.94	6.34	\$ 622,108
Granted	400	15,254	—	12,523	—	1,390	29,567	28.24	17.79	—	—
Exercised options / vested RSUs	(2,672)	(2,913)	(76)	(2,671)	(519)	(6,251)	(15,102)	2.68	43.19	—	—
Change in awards due to performance-based multiplier	—	—	—	1,806	—	—	1,806	—	33.69	—	—
Forfeited	(164)	(1,263)	(5)	(27)	—	(618)	(2,077)	4.73	34.94	—	—
Outstanding at December 31, 2022	12,259	15,273	2,273	13,119	11,152	13,864	67,940	\$ 6.17	\$ 29.64	5.49	\$ 192,062
Granted	800	11,629	—	2,240	—	209	14,878	29.02	19.55	—	—
Exercised options / vested RSUs	(2,414)	(7,211)	(884)	(1,715)	(646)	(12,310)	(25,180)	4.16	42.29	—	—
Change in awards due to performance-based multiplier	—	—	—	1,141	—	—	1,141	—	60.25	—	—
Forfeited	(285)	(1,810)	—	(976)	—	(508)	(3,579)	4.39	21.18	—	—
Outstanding at December 31, 2023	10,360	17,881	1,389	13,809	10,506	1,255	55,200	\$ 7.10	\$ 21.01	4.59	\$ 645,885

The following table provides additional information for stock option awards outstanding as of December 31, 2023:

	Awards Outstanding	Weighted Average Remaining Term of Options (Years)	Aggregate Intrinsic Value	Weighted Average Exercise Price of Options
Stock options exercisable	21,708	4.5	\$ 643,350	\$ 6.44
Stock options remaining to vest	547	8.9	\$ 2,535	\$ 33.10

As of December 31, 2023, total unrecognized stock-based compensation cost of \$597.5 million related to granted and unvested share-based compensation arrangements that are expected to vest is expected to be recognized over a weighted-average period of 2.6 years. The following table shows stock-based compensation cost for the years ended December 31, 2023, 2022 and 2021:

	Year ended December 31, 2023			Year ended December 31, 2022			Year ended December 31, 2021		
	Options	RSUs	Total ⁽³⁾	Options	RSUs	Total	Options	RSUs	Total
Time Based ⁽¹⁾	\$ 10,178	\$ 183,937	\$ 194,115	\$ 15,222	\$ 103,478	\$ 118,700	\$ 14,654	\$ 61,085	\$ 75,739
PSP ⁽²⁾	—	126,071	126,071	—	90,180	90,180	—	82,089	82,089
LTIP ⁽²⁾	—	78,277	78,277	—	369,919	369,919	—	525,465	525,465
Total	\$ 10,178	\$ 388,285	\$ 398,463	\$ 15,222	\$ 563,577	\$ 578,799	\$ 14,654	\$ 668,639	\$ 683,293

(1) Time-based awards vest and are expensed over a defined service period.

(2) PSP and LTIP awards vest based on defined performance criteria and are expensed based on the probability of achieving such criteria.

(3) Total expenses includes \$20.2 million of liability-classified awards recorded within accounts payable and accrued liabilities in the consolidated balance sheet as of December 31, 2023.

The weighted-average grant-date fair values of options granted during the years ended December 31, 2023, 2022 and 2021 were \$8.59, \$7.46 and \$19.53 per share, respectively.

During the years ended December 31, 2023, 2022 and 2021 the Company received proceeds from the exercise of stock options of \$16.5 million, \$8.7 million and \$31.5 million, respectively, and the aggregate intrinsic value of those stock options exercised was \$101.7 million, \$38.1 million and \$473.4 million, respectively. The total grant date fair value of stock options that vested during the years ended December 31, 2023, 2022 and 2021 were \$11.1 million, \$15.3 million and \$14.0 million, respectively.

12. Income Taxes

Loss before income tax (benefit) provision for the years ended December 31, 2023, 2022 and 2021 consists of the following:

	Year ended December 31,		
	2023	2022	2021
United States	\$ (753,105)	\$ (1,329,931)	\$ (1,391,154)
Foreign	(38,148)	(113,027)	(126,490)
Loss before income tax (benefit) provision	\$ (791,253)	\$ (1,442,958)	\$ (1,517,644)

The components of the provision (benefit) for income taxes consists of the following:

	Year ended December 31,		
	2023	2022	2021
Current:			
Federal	\$ —	\$ —	\$ 90
State	433	456	514
Foreign	3,888	5,085	23,174
Total current provision	4,321	5,541	23,778
Deferred:			
Federal	205	(52,411)	(5,523)
State	2,643	(17,624)	(2,075)
Foreign	3,001	(3,372)	(7,911)
Total deferred (benefit) provision	5,849	(73,407)	(15,509)
Total income tax (benefit) provision	\$ 10,170	\$ (67,866)	\$ 8,269

The reconciliation between income taxes computed at the U.S. statutory income tax rate to our provision for income taxes for the years ended December 31, 2023, 2022 and 2021 is as follows:

	Year ended December 31,		
	2023	2022	2021
Benefit for income taxes at 21% rate	\$ (166,217)	\$ (303,028)	\$ (318,705)
Prior year provision true-ups	1,321	938	(16,878)
State taxes, net of federal benefit	(40,385)	(17,265)	(142,119)
Internal restructurings	—	—	(167,692)
Stock-based compensation (benefit) expense	26,155	28,015	(70,150)
Non-deductible lobbying expenses	1,009	4,788	9,938
Change in valuation allowance	130,817	166,978	575,225
Non-deductible executive compensation	30,106	54,925	117,849
(Gain) loss on remeasurement of warrant liabilities	12,084	(6,173)	(6,301)
Foreign rate differential	3,348	1,802	16,588
Income tax reserves	4,119	(553)	5,098
Other	7,813	1,707	5,416
Total income tax provision (benefit)	\$ 10,170	\$ (67,866)	\$ 8,269

Significant components of the Company's deferred tax assets (liabilities) as of December 31, 2023 and 2022 are as follows:

	Year ended December 31,	
	2023	2022
Deferred tax assets:		
Net operating loss carryforwards	\$ 1,042,874	\$ 961,352
Intangible assets	82,813	72,299
Accrual and other temporary differences	59,656	57,281
Operating lease	24,784	18,213
Stock-based compensation	51,065	93,582
Capitalized research and development costs	128,719	61,584
Fixed assets	2,451	411
Gross deferred tax assets	1,392,362	1,264,722
Valuation allowance	(1,358,934)	(1,228,117)
Net deferred tax assets	\$ 33,428	\$ 36,605
Deferred tax liabilities:		
Capitalized software costs	\$ (4,535)	\$ (7,529)
Fixed assets	(162)	(3,590)
Operating lease	(25,528)	(16,102)
Other	(7,798)	(7,943)
Gross deferred tax liabilities	(38,023)	(35,164)
Total net deferred tax (liabilities) assets	\$ (4,595)	\$ 1,441

In assessing whether it is more likely than not that deferred tax assets will be realized, the Company considers all available evidence, both positive and negative, including its recent cumulative earnings or loss, experience and expectations of future available taxable income of the appropriate source and character by taxing jurisdiction, tax attribute carryback and carryforward periods available for tax purposes, and prudent and feasible tax planning strategies.

The Company records its deferred tax assets of \$7.8 million and \$10.7 million for 2023 and 2022, respectively, in deposits and other non-current assets and its deferred tax liabilities of \$12.4 million and \$9.3 million for 2023 and 2022, respectively, in other long-term liabilities in the consolidated balance sheets. The Company has provided a valuation allowance for the U.S. deferred tax assets as of December 31, 2023. For the year ended December 31, 2023, the U.S. valuation allowance increased by \$130.8 million primarily due to the current year operating losses.

As of December 31, 2023, the Company had U.S. federal and state tax net operating loss ("NOL") carryforwards of \$3.8 billion and \$4.1 billion, respectively, which may be available to offset future income tax liabilities. Of the federal net operating loss carryforward, \$0.7 billion expires at various dates beginning in 2032 through 2037 and \$3.1 billion does not expire. Of the state NOL carryforward, \$3.9 billion expires at various dates beginning in 2024 through 2043 and \$0.2 billion does not expire.

Utilization of the NOL carryforwards may be subject to limitation under Section 382 of the Internal Revenue Code of 1986 based on ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of NOL and tax credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively. There could be additional ownership changes in the future, which may result in additional limitations on the utilization of the NOL and tax credit carryforwards. The Company has analyzed the impact of these limitations on its attributes and included the impact of these limitations in its U.S. deferred tax assets.

As of December 31, 2023, foreign earnings of \$5.7 million have been retained by the Company's foreign subsidiaries for indefinite reinvestment. Upon repatriation of those earnings, in the form of dividends or otherwise, the Company could be subject to withholding taxes payable to the various foreign countries. Determination of the amount of unrecognized deferred income tax liability related to these outside basis differences is not practicable.

In addition to filing federal income tax returns, the Company files income tax returns in numerous states and foreign jurisdictions that impose an income tax. The Company is subject to U.S. federal, state and local income tax examinations by tax authorities for the years beginning in 2012. The Company is no longer subject to foreign income tax examinations for tax years prior to 2016.

The following table presents a reconciliation of the total amounts of unrecognized tax benefits, excluding interest and penalties, included in long-term income tax liabilities on the Company's consolidated balance sheets:

	Year ended December 31,		
	2023	2022	2021
Unrecognized tax benefits at the beginning of the year	\$ 58,011	\$ 72,407	\$ 70,341
Additions for tax positions of prior years	1,026	1,807	—
Reduction for tax positions of prior years	(269)	—	—
Additions for tax positions of current year	449	—	—
Settlements	—	(7,412)	—
Foreign currency adjustments	(1,793)	(8,791)	2,066
Unrecognized tax benefits at the end of the year	\$ 57,424	\$ 58,011	\$ 72,407

As of December 31, 2023, 2022 and 2021, the Company had \$55.9 million, \$58.0 million and \$72.4 million, respectively, of net unrecognized tax benefits, which would affect the Company's tax rate if recognized. The Company does not anticipate any material changes to its unrecognized tax benefits within the next twelve months.

The Company recognizes interest and penalties accrued related to unrecognized tax benefits as income tax expense. During the years ended December 31, 2023, 2022 and 2021 the Company recognized \$5.0 million, \$6.4 million and \$5.0 million in interest and penalties. The Company had \$16.8 million and \$11.8 million of interest and penalties accrued at December 31, 2023 and 2022, respectively.

Significant judgment is required in evaluating the Company's uncertain tax positions and determining its provision for income taxes. Although the Company believes that it has appropriately reserved for its uncertain tax positions, no assurance can be given that the final tax outcome of these matters will not be different than expectations. The Company will adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit, the refinement of an estimate, the closing of a statutory audit period or changes in applicable tax law. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences would impact the provision for income taxes in the period in which such determination is made. The provision for income taxes includes the impact of reserve provisions and changes to the reserves that are considered appropriate, as well as related net interest.

The Company recognizes liabilities for anticipated tax audit issues in the U.S. and other domestic and international tax jurisdictions based on its estimate of whether, and the extent to which, the tax positions are more likely than not to be sustained based on the technical merits. The Company believes that it has appropriate support for the income tax positions taken and to be taken on its tax returns and that its accruals for tax liabilities are adequate for all open years based on an assessment of many factors including past experience and interpretations of tax laws applied to the facts of each matter.

The Company believes it maintains appropriate reserves to offset any potential income tax liabilities that may arise upon final resolution of matters for open tax years. If such reserve amounts ultimately prove to be unnecessary, the resulting reversal of such reserves could result in tax benefits being recorded in the period the reserves are no longer deemed necessary. If such amounts prove to be less than an ultimate assessment, a future charge to expense would be recorded in the period in which the assessment is determined.

13. Loss Per Share

The computation of loss per share and weighted-average shares of the Company's Class A common stock outstanding for the periods presented are as follows:

	Year ended December 31,		
	2023	2022	2021
Net loss	\$ (802,142)	\$ (1,377,987)	\$ (1,523,195)
Basic and diluted weighted-average common shares outstanding	462,599	436,513	402,492
Loss per share attributable to common stockholders (in dollars):			
Basic and diluted	\$ (1.73)	\$ (3.16)	\$ (3.78)

For the periods presented, the following securities were not required to be included in the computation of diluted shares outstanding:

	Year ended December 31,		
	2023	2022	2021
Class A common stock resulting from exercise of all warrants	3,524	3,761	1,613
Stock options and RSUs	55,200	67,941	53,746
Convertible notes	13,337	13,337	13,337
Total	72,061	85,039	68,696

14. Related-Party Transactions

Financial Advisor

On May 7, 2021, DraftKings entered into a master engagement letter (as amended, the “Master Engagement Letter”), with Raine Securities LLC (the “Financial Advisor”), an affiliate of Raine. John Salter, who served as a member of our Board of Directors until April 2022, is a partner of Raine. Pursuant to the Master Engagement Letter, Raine Securities will act as a financial advisor to DraftKings in connection with certain proposed transactions, and DraftKings will pay Raine Securities certain fees and expenses from time to time on the terms and conditions described in the related statements of work. During 2023, 2022 and 2021, the Company incurred \$0.0 million, \$8.5 million, \$2.5 million, respectively, of professional fees in connection with certain business combination transactions and offerings undertaken by the Company, which are recorded within general and administrative expenses on the consolidated statement of operations.

Receivables from Equity Method Investments

The Company provides office space and general operational support to DKFS, LLC, an equity-method affiliate. The operational support is primarily general and administrative services. As of December 31, 2023, and 2022, the Company had \$0.0 million and \$0.2 million, respectively, of receivables from the entity related to those services and expenses to be reimbursed to the Company. The Company has committed to invest up to \$17.5 million into DBDK Venture Fund I, LP, a Delaware limited partnership and a subsidiary of DKFS, LLC. As of December 31, 2023, the Company had invested a total of \$7.6 million of the total commitment.

Transactions with a Former Director and their Immediate Family Members

During 2023, 2022 and 2021, the Company had \$1.4 million, \$2.3 million, and \$4.5 million, respectively, in sales to entities related to an immediate family member of a former director. The Company had an associated accounts receivable balance of \$0.0 million and \$0.2 million as of December 31, 2023 and December 31, 2022, respectively, included in accounts receivable in its consolidated balance sheets.

Aircraft

Starting in 2022, from time to time, the Company has chartered, without mark-up, the private plane owned by Jason Robins, the Company’s Chief Executive Officer, utilizing aircraft services from Jet Aviation Flight Services, Inc. for the business and personal travel of Mr. Robins and his family. The Company had no direct or indirect interest in such private plane. During 2023 and 2022, the Company incurred no expenses and \$0.7 million of expense, respectively, for use of the aircraft under these chartering services, which was superseded by the lease referred to below.

On March 30, 2022, the Company entered into a one-year lease of an aircraft from an entity controlled by Mr. Robins, pursuant to which Mr. Robins' entity leased the aircraft to the Company for \$0.6 million for a one-year period (the "Original Aircraft Lease"). The Company covered all operating, maintenance and other expenses associated with the aircraft. The Original Aircraft Lease expired in accordance with its terms on March 30, 2023, and DraftKings entered into a new one-year lease of such aircraft from an entity controlled by Mr. Robins for \$0.6 million and otherwise on terms and conditions substantially the same as the Original Aircraft Lease, effective upon the expiration of the Original Aircraft Lease (collectively with the Original Aircraft Lease, the "Aircraft Leases"). The audit and compensation committees of the Company's Board of Directors approved this arrangement, as well as the Aircraft Leases, based on, among other things, the requirements of the overall security program that Mr. Robins and his family fly private and the committees' assessment that such an arrangement is more efficient and flexible and better ensures safety, confidentiality and privacy. During 2023 and 2022, the Company incurred \$0.6 million and \$0.4 million of expense, respectively, under the aircraft lease.

15. Leases, Commitments and Contingencies

Leases

The Company leases corporate office facilities, data centers, and motor vehicles under operating lease agreements. Some of the Company's leases include one or more options to renew. For a majority of the Company's leases, it does not assume renewals in its determination of the lease term as the renewals are not deemed to be reasonably assured. The Company's lease agreements generally do not contain any material residual value guarantees or material restrictive covenants. As of December 31, 2023, the Company's lease agreements typically have terms not exceeding ten years.

Payments under the Company's lease arrangements may be fixed or variable, and variable lease payments primarily represent costs related to common area maintenance and utilities. The components of lease expense are as follows:

	December 31, 2023	December 31, 2022	December 31, 2021
Operating lease cost	\$ 19,175	\$ 20,003	\$ 16,551
Short term lease cost	2,616	6,004	3,273
Variable lease cost	4,644	4,462	4,261
Sublease income	(704)	(849)	(774)
Total lease cost	\$ 25,731	\$ 29,620	\$ 23,311

Supplemental cash flow and other information for 2023 and 2022 related to operating leases was as follows:

	December 31, 2023	December 31, 2022
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 13,561	\$ 16,390
Right-of-use assets obtained in exchange for new operating lease liabilities	\$ 21,917	\$ 18,134

The weighted-average remaining lease term and weighted-average discount rate for the Company's operating leases were 7.3 years and 6.5% as of December 31, 2023. The Company calculated the weighted-average discount rates using incremental borrowing rates, which equal the rates of interest that it would pay to borrow funds on a fully collateralized basis over a similar term.

Maturity of lease liabilities are as follows:

	December 31,
2024	\$ 16,519
2025	15,127
2026	14,693
2027	15,542
2028	16,228
Thereafter	39,644
Total undiscounted future cash flows	117,753
Less: Imputed interest	(25,427)
Present value of undiscounted future cash flows	\$ 92,326

Other Contractual Obligations and Contingencies

The Company is a party to several non-cancelable contracts with vendors where the Company is obligated to make future minimum payments under the terms of these contracts as follows:

	Year ending December 31,
2024	\$ 467,609
2025	357,058
2026	199,339
2027	112,588
2028	86,802
Thereafter	181,228
Total	\$ 1,404,624

Surety Bonds

As of December 31, 2023, the Company has been issued \$215.0 million in surety bonds at a combined annual premium cost of 0.4% which are held for certain regulators' use and benefit in order for the Company to satisfy state license requirements. There have been no claims against such bonds and the likelihood of future claims is remote.

Contingencies

From time to time, and in the ordinary course of business, the Company may be subject to certain claims, charges and litigation concerning matters arising in connection with the conduct of the Company's business activities.

Interactive Games LLC

On June 14, 2019, Interactive Games LLC filed suit against the Company in the U.S. District Court for the District of Delaware, alleging that our Daily Fantasy Sports product offering infringes two patents and the Company's Sportsbook product offering infringes two different patents. The Company intends to vigorously defend this case. In the event that a court ultimately determines that the Company is infringing the asserted patents, it may be subject to substantial damages, which may include treble damages and/or an injunction that could require the Company to modify certain features that we currently offer.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon our operating results for such period.

Winview Inc.

On July 7, 2021, Winview Inc., a Delaware corporation, filed suit against the Company in the U.S. District Court for the District of New Jersey, which was subsequently amended on July 28, 2021, alleging that our Sportsbook product offering infringes two patents, our Daily Fantasy Sports product offering infringes one patent, and that our Sportsbook product offering and Daily Fantasy Sports product offering infringe another patent. On November 15, 2021, Winview Inc. filed a second amended complaint (the "SAC"), adding as defendants DK Crown Holdings Inc. ("DK DE") and Crown Gaming Inc., a Delaware corporation, which are wholly-owned subsidiaries of the Company. The SAC largely repeats the allegations of the first amended complaint.

The Company intends to vigorously defend this case. In the event that a court ultimately determines that the Company is infringing the asserted patents, it may be subject to substantial damages, which may include treble damages and/or an injunction that could require the Company to modify certain features that we currently offer.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Securities Matters Arising From the Hindenburg Report and Related Matters

Beginning on July 9, 2021, the Company received subpoenas from the SEC seeking documents concerning, among other things, certain of the allegations concerning SBTech that were contained in a report published about the Company on June 15, 2021 by Hindenburg Research, as well as the Company's adherence to and disclosures regarding its compliance policies and procedures, and related matters. The Company intends to comply with the related requests and is cooperating with the SEC's ongoing inquiry.

The Company cannot predict with any degree of certainty the outcome of the SEC matter or determine the extent of any potential liabilities. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in the SEC matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of the SEC matter will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Matters Related to the GNOG Transaction

On August 12, 2022, a putative class action was filed in Nevada state District Court in Clark County against Golden Nugget Online Gaming, Inc. ("GNOG Inc."), the Company and one of its officers and two affiliates, as well as former officers or directors and the former controlling stockholder of GNOG Inc. and Jefferies LLC. The lawsuit asserts claims on behalf of a putative class of former minority stockholders of GNOG Inc. alleging that certain former officers and directors of GNOG Inc. and its former controlling stockholder (Tilman Fertitta and/or Fertitta Entertainment, Inc.) breached their fiduciary duties to minority stockholders of GNOG Inc. in connection with the GNOG Transaction, and the other defendants aided and abetted the alleged breaches of fiduciary duty.

On September 9, 2022, two similar putative class actions were filed in the Delaware Court of Chancery against former directors of GNOG Inc. and its former controlling stockholder, one of which also names the Company and Jefferies Financial Group, Inc. as defendants. These pending actions in Delaware assert substantially similar claims on behalf of a putative class of former minority stockholders of GNOG Inc. alleging that certain former officers and directors of GNOG Inc. and its former controlling stockholder (Tilman Fertitta) breached their fiduciary duties to minority stockholders of GNOG Inc. in connection with the GNOG Transaction, and one of the actions also alleges that the Company aided and abetted the alleged breaches of fiduciary duty. On October 12, 2022, the Delaware Court of Chancery consolidated these two actions under the caption *In re Golden Nugget Online Gaming, Inc. Stockholders Litigation*. At a mediation held on January 24, 2024, the parties reached an agreement in principle to settle the Delaware action, subject to negotiation and execution of mutually agreeable definitive documentation and the performance and satisfaction of terms and conditions set forth thereof. The estimated loss was accrued as of December 31, 2023 in the accounts payable and accrued expenses line-item on the consolidated balance sheet.

The Company intends to vigorously defend the Nevada action. The Company cannot predict with any degree of certainty the outcome of the Nevada action or determine the extent of any potential liabilities. The Company also cannot provide an estimate of the possible loss or range of loss of the Nevada action. Any adverse outcome in the Nevada action could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of the Nevada action will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

AG 18, LLC d/b/a/ Arrow Gaming

On August 19, 2021, AG 18, LLC d/b/a/ Arrow Gaming ("Arrow Gaming") filed a complaint against the Company in the United States District Court for the District of New Jersey alleging that the Company's DFS and Casino product offerings infringe four patents. On October 12, 2021, Arrow Gaming filed an amended complaint to add one additional patent. On December 20, 2021, Arrow Gaming filed a second amended complaint adding new allegations with respect to alleged willful infringement.

The Company intends to vigorously defend this case. In the event that a court ultimately determines that the Company is infringing the asserted patents, it may be subject to substantial damages, which may include treble damages and/or an injunction that could require the Company to modify certain features that we currently offer.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Beteiro, LLC

On November 22, 2021, Beteiro, LLC filed a complaint against the Company in the United States District Court for the District of New Jersey alleging that the Company's Sportsbook and Casino product offerings infringe four patents.

The Company intends to vigorously defend this case. In the event that a court ultimately determines that the Company is infringing the asserted patents, it may be subject to substantial damages, which may include treble damages and/or an injunction that could require the Company to modify certain features that we currently offer.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Diogenes Ltd. & Colossus (IOM) Ltd.

On December 1, 2021, Diogenes Ltd. & Colossus (IOM) Ltd. ("Colossus"), filed a complaint against the Company in the United States District Court for the District of Delaware alleging that the Company's Sportsbook product offering infringes seven patents. Colossus amended its complaint on February 7, 2022 to, among other things, add one additional patent.

The Company intends to vigorously defend this case. In the event that a court ultimately determines that the Company is infringing the asserted patents, it may be subject to substantial damages, which may include treble damages and/or an injunction that could require the Company to modify certain features that we currently offer.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this proceeding will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Steiner

Nelson Steiner filed suit against the Company and FanDuel Inc. in Florida state court on November 9, 2015. The action was subsequently transferred to In Re: Daily Fantasy Sports Litigation (Multi-District Litigation) (the "MDL"), and Mr. Steiner's action was consolidated into the MDL's amended complaint, which, in February 2016, consolidated numerous actions (primarily purported class actions) filed against the Company, FanDuel, and other related parties in courts across the United States. By June 23, 2022, the MDL was resolved, except for Mr. Steiner's action, and the court officially closed the MDL docket on July 8, 2022.

Mr. Steiner brings this action as a concerned citizen of the state of Florida alleging that, among other things, defendants' daily fantasy sports contests are illegal gambling under the state laws of Florida and seeks disgorgement of "gambling losses" purportedly suffered by Florida citizens on behalf of the state. On June 23, 2022, the MDL court remanded Mr. Steiner's action to the Circuit Court for Pinellas County, Florida. Plaintiff has not yet filed an amended pleading.

The Company intends to vigorously defend this suit. Any adverse outcome in this matter could be subject the Company to substantial damages and it could be restricted from offering DFS contests in Florida. The Company cannot provide any assurance as to the outcome of this matter.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this matter will have a material adverse effect on Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Turley

On January 9, 2023, Simpson G. Turley, individually and on behalf of all others similarly situated, filed a purported class action against the Company in the United States District Court for the District of Massachusetts. Plaintiff alleges, among other things, that he was a contestant in the Company's daily fantasy showdown contest for the January 2, 2023, NFL game between the Cincinnati Bengals and the Buffalo Bills (the "Bengals-Bills Game"). The Bengals-Bills Game was postponed and

eventually cancelled due to Damar Hamlin collapsing during the game. Plaintiff alleges that he was winning prizes in multiple showdown contests at the point in time that the Bengals-Bills Game was cancelled (with 5:58 remaining in the first quarter). Plaintiff alleges that, instead of paying out the prize money, the Company refunded entry fees to contestants that entered showdown or flash draft fantasy contests. On May 8, 2023, plaintiff Turley and a new plaintiff (Erik Ramos) filed a First Amended Class Action Complaint. The plaintiffs assert claims for breach of contract, unfair and deceptive acts and practices, false advertising, and unjust enrichment. Among other things, plaintiffs seek statutory damages, monetary damages, punitive damages, attorney fees and interest.

The Company intends to vigorously defend this case. Any adverse outcome in this matter could subject the Company to substantial damages and/or require alterations to the Company's business. The Company cannot provide any assurance as to the outcome of this matter.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this matter will have a material adverse effect on Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Securities Matters Related to DraftKings Marketplace

On March 9, 2023, a putative class action was filed in Massachusetts federal court by alleged purchasers of non-fungible tokens ("NFTs") on the DraftKings Marketplace ("DK Marketplace"). The complaint asserts claims for violations of federal and state securities laws against the Company and three of its officers on the grounds that, among other things, the NFTs that are sold and traded on the DK Marketplace allegedly constitute securities that were not registered with the SEC in accordance with federal and Massachusetts law, and that the DK Marketplace is a securities exchange that is not registered in accordance with federal and Massachusetts law. Based on these allegations, plaintiff brings claims seeking rescissory damages and other relief on behalf of himself and a putative class of persons who purchased NFTs on the DK Marketplace between August 11, 2021 and the present. The Company intends to vigorously defend this matter.

On July 17, 2023, the Company received a subpoena from the Securities Division of the Office of the Secretary of the Commonwealth of Massachusetts seeking documents and requesting answers to interrogatories concerning, among other things, DK Marketplace and NFTs that are sold on DK Marketplace, and related matters. We intend to comply with these requests.

The Company cannot predict with any degree of certainty the outcome of these matters or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in these matters could expose the Company to substantial damages, penalties and/or require alterations to the Company's business that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of these matters will have a material adverse effect on Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Shareholder Derivative Litigation Related to DraftKings Marketplace

On May 31, 2023, a putative shareholder derivative action was filed in Nevada state court by an alleged shareholder of the Company. The action asserts claims on behalf of the Company against certain senior officers and members of the Board of Directors of the Company for breach of fiduciary duty and unjust enrichment based primarily on allegations that the defendants caused or allowed the Company to disseminate misleading and inaccurate information to its shareholders in connection with NFTs that are sold and traded on the DK Marketplace. The action also alleges that certain individuals are liable for trading in Company stock at artificially inflated prices. The action seeks unspecified compensatory damages, changes to corporate governance and internal procedures, restitution, disgorgement, costs and attorney's fees, and other unspecified relief.

The Company cannot predict with any degree of certainty the outcome of this matter or determine the extent of any potential liabilities. The Company also cannot provide an estimate of the possible loss or range of loss. Because this action

alleges claims on behalf of the Company and purports to seek a judgment in favor of the Company, the Company does not believe, based on currently available information, that the outcome of the proceedings will have a material adverse effect on the Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Scanlon

On December 8, 2023, plaintiffs Melissa Scanlon and Shane Harris, individually and on behalf of others similarly situated, filed a purported Massachusetts class action lawsuit against DraftKings in Middlesex County Superior Court of Massachusetts. Among other things, Plaintiffs allege that the Company's promotion that offered new customers an opportunity to earn up to 1,000 in site credits, and related advertisements, were: (1) unfair or deceptive practices in violation of Massachusetts General Laws ("M.G.L.") c. 93A, §§ 2, 9; and (2) untrue and misleading advertising in violation of M.G.L. c. 266, § 91. The Plaintiffs are seeking, among other things, injunctive relief, actual damages, double or treble damages, and attorneys' fees.

The Company intends to vigorously defend this case. Any adverse outcome in this matter could subject the Company to substantial damages and/or require alterations to the Company's business. The Company cannot provide any assurance as to the outcome of this matter.

The Company cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The Company also cannot provide an estimate of the possible loss or range of loss. Any adverse outcome in this matter could expose the Company to substantial damages or penalties that may have a material adverse impact on the Company's operations and cash flows.

Despite the potential for significant damages, the Company does not believe, based on currently available information, that the outcome of this matter will have a material adverse effect on Company's financial condition, although the outcome could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

Internal Revenue Service

The Company is currently under Internal Revenue Service audit for prior tax years, with the primary unresolved issues relating to excise taxation of fantasy sports contests and informational reporting and withholding. The final resolution of that audit, and other audits or litigation, may differ from the amounts recorded in these consolidated financial statements and may materially affect the Company's consolidated financial statements in the period or periods in which that determination is made.

16. Subsequent Events

Pending Acquisition of Jackpocket Inc. ("Jackpocket")

On February 11, 2024, the Company entered into a definitive agreement (the "Merger Agreement") to acquire Jackpocket for total consideration of \$750 million, with approximately 55 percent of the consideration payable in cash funded from the Company's existing cash and cash equivalents balance, and approximately 45 percent of the consideration payable in the Company's Class A common stock, subject to customary purchase price adjustments and the collar mechanism described below (the "Jackpocket Transaction").

Under the terms of the Merger Agreement and subject to the terms and conditions set forth therein, the stock consideration will be subject to a collar pursuant to which a variable number of shares of DraftKings' Class A common stock will be issued to Jackpocket stockholders in order to deliver a value of \$337.5 million, so long as the 30-trading-day volume weighted average price of DraftKings' Class A common stock as of the second trading day immediately preceding the closing of the Jackpocket Transaction (the "Closing Stock Price") remains between \$31.68 and \$42.86. In the event that DraftKings' Closing Stock Price is above \$42.86 or below \$31.68, Jackpocket stockholders will receive a fixed number of approximately 7,874,806 shares and 10,654,149 shares, respectively, of DraftKings' Class A common stock, subject to adjustment in certain limited circumstances to the minimum extent necessary to maintain a tax-free transaction.

The consummation of the Jackpocket Transaction is subject to the receipt of required regulatory approvals and other customary closing conditions.

(b) Exhibits. The following exhibits are being followed herewith:

Exhibit No.	Description
<u>2.1†</u>	<u>Business Combination Agreement, dated as of December 22, 2019, among DraftKings Inc., SBTech (Global) Limited, SBTech's shareholders, Diamond Eagle Acquisition Corp., DEAC NV Merger Corp. and a wholly-owned subsidiary of DEAC (incorporated by reference to Exhibit 2.1 of DEAC NV Merger Corp.'s Registration Statement on Form S-4 (Reg. No. 333-235805), filed with the SEC on April 14, 2020).</u>
<u>2.2</u>	<u>Agreement and Plan of Merger, dated as of March 12, 2020, by and among Diamond Eagle Acquisition Corp. and DEAC NV Merger Corp. (incorporated by reference to Exhibit 2.3 of DEAC NV Merger Corp.'s Registration Statement on Form S-4 (Reg. No. 333-235805), filed with the SEC on April 14, 2020).</u>
<u>2.3</u>	<u>Amendment to Business Combination Agreement, dated as of April 7, 2020, among DraftKings Inc., SBTech (Global) Limited, SBTech's shareholders, Diamond Eagle Acquisition Corp., DEAC NV Merger Corp. and a wholly-owned subsidiary of DEAC (incorporated by reference to Exhibit 2.4 of DEAC NV Merger Corp.'s Registration Statement on Form S-4 (Reg. No. 333-235805), filed with the SEC on April 14, 2020).</u>
<u>2.4***</u>	<u>Agreement and Plan of Merger, by and among DraftKings Inc., New Duke Holdco, Inc., Golden Nugget Online Gaming, Inc., Duke Merger Sub, Inc. and Gulf Merger Sub, Inc., dated as of August 8, 2021 (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the SEC on August 10, 2021).</u>
<u>2.5***</u>	<u>Agreement and Plan of Merger and Plan of Reorganization, dated as of February 11, 2024, by and among DraftKings Inc., DraftKings Holdings Inc., Fortune Merger Sub Inc., Fortune Merger Sub LLC, JackPocket, Inc. and Shareholder Representative Services LLC (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed with the SEC on February 15, 2024).</u>
<u>3.1</u>	<u>Amended and Restated Articles of Incorporation of DraftKings Inc. (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K, filed with the SEC on May 5, 2022).</u>
<u>3.2</u>	<u>Amended and Restated Bylaws of DraftKings Inc. (incorporated by reference to Exhibit 3.2 of the Company's Current Report on Form 8-K, filed with the SEC on May 5, 2022).</u>
<u>4.1*</u>	<u>Specimen Class A Common Stock Certificate of DraftKings.</u>
<u>4.2</u>	<u>Form of Warrant Certificate of DraftKings Inc. (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020).</u>
<u>4.3</u>	<u>Warrant Agreement, dated May 10, 2019, by and between Diamond Eagle Acquisition Corp. and Continental Stock Transfer & Trust Company, as warrant agent (incorporated by reference to Exhibit 4.1 of Diamond Eagle Acquisition Corp.'s Current Report on Form 8-K filed on May 14, 2019).</u>
<u>4.4</u>	<u>Assignment and Assumption Agreement, dated April 23, 2020, by and among DraftKings Inc., DEAC, Continental Stock Transfer & Trust Company, Computershare Trust Company, N.A. and Computershare Inc. (incorporated by reference to Exhibit 4.4 of the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020).</u>
<u>4.5</u>	<u>Indenture, dated as of March 18, 2021, between the Company and Computershare Trust Company, N.A., as trustee (including Form of 0% Convertible Senior Notes due 2028) (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the SEC on March 18, 2021).</u>
<u>4.6</u>	<u>First Supplemental Indenture, dated as of May 5, 2022, between DraftKings Inc., Old DraftKings and Computershare Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.6 of the Company's Current Report on Form 8-K, filed with the SEC on May 5, 2022).</u>
<u>4.7</u>	<u>Description of DraftKings Inc.'s Capital Stock (incorporated by reference to DraftKings Inc.'s Registration Statement on Form S-4 (Reg. No. 333-260174), filed with the SEC on December 9, 2021).</u>
<u>4.8</u>	<u>Assignment and Assumption Agreement, dated May 5, 2022, by and among DraftKings Inc., GNOG, Continental and Computershare (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K, filed with the SEC on May 5, 2022).</u>
<u>4.9</u>	<u>Assignment and Assumption Agreement, dated May 5, 2022, by and among DraftKings Inc., Old DraftKings and Computershare (incorporated by reference to Exhibit 4.5 of the Company's Current Report on Form 8-K, filed with the SEC on May 5, 2022).</u>
<u>10.1+</u>	<u>DraftKings Inc. 2020 Incentive Award Plan (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020).</u>
<u>10.2</u>	<u>Form of Subscription Agreement, dated December 22, 2019, by and between Diamond Eagle Acquisition Corp. and the undersigned subscriber party thereto (incorporated by reference to Exhibit 10.2 of DEAC NV Merger Corp.'s Registration Statement on Form S-4 (Reg. No. 333-235805), filed with the SEC on April 14, 2020).</u>
<u>10.3+</u>	<u>Executive Employment Agreement, dated April 23, 2020, between DraftKings Inc. and Matt Kalish (incorporated by reference to Exhibit 10.2 the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020).</u>

- [10.4+](#) [Executive Employment Agreement, dated April 23, 2020, between DraftKings Inc. and Paul Liberman \(incorporated by reference to Exhibit 10.3 the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020\).](#)
- [10.5+](#) [Executive Employment Agreement, dated April 23, 2020, between DraftKings Inc. and Jason Robins \(incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020\).](#)
- [10.6+](#) [DraftKings Inc. Employee Stock Purchase Plan \(incorporated by reference to Exhibit 10.5 of the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020\).](#)
- [10.7](#) [Form of Indemnification Agreement \(incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on May 5, 2022\).](#)
- [10.8](#) [Earnout Escrow Agreement, dated April 23, 2020, by and among DraftKings Inc., Shalom Meckenzie, in his capacity as SBT Sellers' Representative, Eagle Equity Partners LLC, Jeff Sagansky, Eli Baker, Harry Sloan, I.B.I. Trust Management, the trustee, and Computershare Trust Company, N.A., as escrow agent \(incorporated by reference to Exhibit 10.8 of the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020\).](#)
- [10.9](#) [Stockholders Agreement, dated April 23, 2020, by and among DraftKings Inc., the DK Stockholder Group, the SBT Stockholder Group and the DEAC Stockholder Group \(incorporated by reference to Exhibit 10.9 of the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020\).](#)
- [10.10](#) [Amendment to Stockholders Agreement, dated October 5, 2020, by and among DraftKings Inc., the DK Stockholder Group, the SBT Stockholder Group and the DEAC Stockholder Group \(incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on October 5, 2020\).](#)
- [10.11](#) [Share Exchange Agreement, dated April 23, 2020, by and among DraftKings Inc., a Delaware corporation, Jason Robins and DEAC NV Merger Corp. \(incorporated by reference to Exhibit 10.10 of the Company's Current Report on Form 8-K, filed with the SEC on April 29, 2020\).](#)
- [10.12+***](#) [Agreement for the Provision of a Sports Betting Solution \("License Agreement"\), between Sports Information Services Limited and Crown Gaming Inc., dated as of June 19, 2018 \(incorporated by reference to Exhibit 10.5 of DEAC NV Merger Corp.'s Registration Statement on Form S-4 \(Reg. No. 333-235805\), filed with the SEC on April 14, 2020\).](#)
- [10.13+***](#) [Addendum to License Agreement, between Sports Information Services Limited and Crown Gaming Inc., dated as of August 22, 2019 \(incorporated by reference to Exhibit 10.6 of DEAC NV Merger Corp.'s Registration Statement on Form S-4 \(Reg. No. 333-235805\), filed with the SEC on April 14, 2020\).](#)
- [10.14+***](#) [Addendum, dated as of July 23, 2020 to the Agreement for the Provision of a Sports Betting Solution between Sports Information Services Limited and Crown Gaming Inc., dated as of June 19, 2018 \(incorporated by reference to Exhibit 10.1 to DraftKings Inc.'s Current Report on Form 8-K \(File No. 001-38908\), filed with the SEC on July 23, 2020\).](#)

10.15+	DraftKings Inc. 2017 Equity Incentive Plan, as amended from time to time (incorporated by reference to Exhibit 10.22 of the Company's Registration Statement on Form S-1 (No. 333-238051), filed with the SEC on May 6, 2020).
10.16+	Form of Stock Option Award Agreement (incorporated by reference to Exhibit 10.10 of the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 15, 2020).
10.17+	Form of Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.11 of the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 15, 2020).
10.18	Form of Base Capped Call Transaction Confirmation (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on March 18, 2021).
10.19	Form of Additional Capped Call Transaction Confirmation (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed with the SEC on March 18, 2021).
10.20	Amended Executive Employment Agreement, dated August 5, 2021, between DraftKings Inc. and R. Stanton Dodge (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q, filed with the SEC on August 6, 2021).
10.21	Amended and Restated Executive Employment Agreement, dated August 5, 2021, between DraftKings Inc. and Jason Park (incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q, filed with the SEC on August 6, 2021).
10.22	Support Agreement, by and among DraftKings Inc., Tilman J. Fertitta, Fertitta Entertainment, Inc., Landry's Fertitta, LLC, Golden Landry's LLC, Golden Fertitta, LLC and New Duke Holdeo, Inc., dated as of August 8, 2021 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on August 10, 2021).
14.1	Code of Business Ethics of the Company, dated April 23, 2020 (incorporated by reference to Exhibit 14.1 of the Company's Amended Annual Report on Form 10-K/A, filed with the SEC on May 3, 2021).
21.1*	List of Subsidiaries.
23.1*	Consent of BDO USA, P.C., independent registered public accounting firm.
31.1*	Certification of Chief Executive Officer pursuant to Rules 13a-14 and 15d-14 promulgated under the Securities Exchange Act of 1934.
31.2*	Certification of Chief Financial Officer pursuant to Rules 13a-14 and 15d-14 promulgated under the Securities Exchange Act of 1934.
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97.1*	Executive Compensation Clawback Policy, dated as of December 1, 2023
99.1	Loan and Security Agreement, dated as of December 20, 2022, by and among DraftKings Inc., as borrower, the guarantors listed therein, the lenders listed therein, Pacific Western Bank, as administrative agent, collateral agent and payment agent, Citizens Bank, N.A., as syndication agent, and Pacific Western Bank and Citizens Bank, N.A., as joint bookrunners and joint lead arrangers (incorporated by reference to Exhibit 99.1 of the Company's Annual Report on Form 10-K, filed with the SEC on February 17, 2023).
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document
104.1	Cover Page Interactive Data File (Embedded within the Inline XBRL document and included in Exhibit).

* Filed herewith.

** Certain portions of this exhibit have been omitted pursuant to Regulation S-K Item 601(b)(10)(iv). The Registrant agrees to furnish an unredacted copy of the exhibit to the SEC upon its request.

*** Annexes, schedules and/or exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Company agrees to furnish supplementally a copy of any omitted attachment to the SEC on a confidential basis upon request.

† Certain of the exhibits and schedules to this Exhibit have been omitted in accordance with Regulation S-K Item 601(a)(5). The Registrant agrees to furnish a copy of all omitted exhibits and schedules to the SEC upon its request.

+ Management contract or compensatory plan or arrangement.

Item 16. Form 10-K Summary.

None.

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: February 16, 2024

By: /s/ Jason K. Park
Name: Jason K. Park
Title: Chief Financial Officer

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints Jason D. Robins, R. Stanton Dodge, and Jason K. Park, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file any and all amendments to this annual report on Form 10-K and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	Position	Date
<u>/s/ Jason D. Robins</u> Jason D. Robins	Chief Executive Officer and Chairman (Principal Executive Officer)	February 16, 2024
<u>/s/ Jason K. Park</u> Jason K. Park	Chief Financial Officer (Principal Financial and Accounting Officer)	February 16, 2024
<u>/s/ Harry Evans Sloan</u> Harry Evans Sloan	Vice Chairman	February 16, 2024
<u>/s/ Matthew Kalish</u> Matthew Kalish	Director	February 16, 2024
<u>/s/ Woodrow H. Levin</u> Woodrow H. Levin	Director	February 16, 2024
<u>/s/ Paul Liberman</u> Paul Liberman	Director	February 16, 2024
<u>/s/ Jocelyn Moore</u> Jocelyn Moore	Director	February 16, 2024
<u>/s/ Ryan R. Moore</u> Ryan R. Moore	Director	February 16, 2024
<u>/s/ Valerie Mosley</u> Valerie Mosley	Director	February 16, 2024
<u>/s/ Steven J. Murray</u> Steven J. Murray	Director	February 16, 2024
<u>/s/ Marni M. Walden</u> Marni M. Walden	Director	February 16, 2024

ZQ|CERT#|COY|CLS|RGSTRY|ACCT#|TICKET|TYPE|RUN#|TRANS#

MR A SAMPLE
DESIGNATION (if ANY)
ADD 1
ADD 2
ADD 3
ADD 4

PO BOX 595006, Louisville, KY 40233-5006

DRAFT KINGS

CUSIP IDENTIFIER
Holder ID
Insurance Value
Number of Shares
DTC

1234567890/1234567890
1234567890/1234567890
1234567890/1234567890
1234567890/1234567890
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NumNo. Denom. Total

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1,000,000.00
123456
12345678 123456789012345

Total Transaction

Class A Common Stock		Class A Common Stock	
Par Value \$0.0001			
Certificate Number ZQ00000000		DRAFT KINGS DRAFTKINGS INC. INCORPORATED UNDER THE LAWS OF THE STATE OF NEVADA	
THIS CERTIFIES THAT		SEE REVERSE FOR CERTAIN DEFINITIONS	
MR SAMPLE & MRS SAMPLE & MR SAMPLE & MRS SAMPLE		CUSIP 26142V 10 5	
is the owner of		ZERO HUNDRED THOUSAND ZERO HUNDRED AND ZERO	
FULLY PAID AND NON-ASSESSABLE SHARES OF CLASS A COMMON STOCK, PAR VALUE \$0.0001 PER SHARE OF			
DraftKings Inc. (hereinafter called the "Company"), transferable on the books of the Company in person or by duly authorized attorney upon surrender of this certificate properly endorsed.			
This certificate is not valid unless countersigned by the Transfer Agent and registered by the Registrar of the Company. Witness the facsimile signature of a duly authorized signatory of the Company.			
 Chief Executive Officer and Chairman		DATED DD-MMM-YYYY COUNTERSIGNED AND REGISTERED: COMPUTERSHARE TRUST COMPANY, N.A. TRANSFER AGENT AND REGISTRAR,	
 Chief Legal Officer and Secretary		By _____ AUTHORIZED SIGNATURE	

DRAFTKINGS INC., a Nevada corporation

THE COMPANY WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUESTS, A STATEMENT OF THE POWERS, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OR SERIES THEREOF OF THE COMPANY AND THE QUALIFICATIONS, LIMITATIONS, OR RESTRICTIONS OF SUCH PREFERENCES AND/OR RIGHTS. THIS CERTIFICATE AND THE SHARES REPRESENTED THEREBY ARE ISSUED AND SHALL BE HELD SUBJECT TO ALL OF THE PROVISIONS OF THE ARTICLES OF INCORPORATION OF THE COMPANY AND ALL AMENDMENTS THERETO AND RESOLUTIONS OF THE BOARD OF DIRECTORS PROVIDING FOR THE ISSUE OF SECURITIES (COPIES OF WHICH MAY BE OBTAINED FROM THE SECRETARY OF THE COMPANY), TO ALL OF WHICH THE HOLDER OF THIS CERTIFICATE BY ACCEPTANCE HEREOF ASSENTS.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common	UNIF GIFT MIN ACT -Custodian (Cust) (Minor)
TEN ENT - as tenants by the entireties	under Uniform Gifts to Minors Act (State)
JT TEN - as joint tenants with right of survivorship and not as tenants in common	UNIF TRF MIN ACT -Custodian (until age) (Cust) (Minor) under Uniform Transfers to Minors Act (Minor) (State)

Additional abbreviations may also be used though not in the above list.

For value received, _____ hereby sell, assign and transfer unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING POSTAL ZIP CODE, OF ASSIGNEE)

_____ Shares
of the Class A Common Stock represented by the within Certificate, and do hereby irrevocably constitute and appoint _____ Attorney
to transfer the said stock on the books of the within-named Company with full power of substitution in the premises.

Dated: _____ 20 _____

Signature: _____

Signature: _____
Notice: The signature to this assignment must correspond with the name as written upon the face of the certificate, in every particular, without alteration or enlargement, or any change whatever.

Signature(s) Guaranteed: Medallion Guarantee Stamp
THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (Banks, Stockbrokers, Savings and Loan Associations and Credit Unions) WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15.

SECURITY INSTRUCTIONS

THIS IS WATERMARKED PAPER. DO NOT ACCEPT WITHOUT NOTING
WATERMARK. HOLD TO LIGHT TO VERIFY WATERMARK.



The IRS requires that the named transfer agent ("we") report the cost basis of certain shares or units acquired after January 1, 2011. If your shares or units are covered by the legislation, and you requested to sell or transfer the shares or units using a specific cost basis calculation method, then we have processed as you requested. If you did not specify a cost basis calculation method, then we have defaulted to the first in, first out (FIFO) method. Please consult your tax advisor if you need additional information about cost basis.

If you do not keep in contact with the issuer or do not have any activity in your account for the time period specified by state law, your property may become subject to state unclaimed property laws and transferred to the appropriate state.

1534281

DRAFTKINGS INC.
LIST OF SUBSIDIARIES
(as of February 16, 2024)

Name of Subsidiary	Country (State)	Percent Ownership
DraftKings Holdings Inc.	United States (Nevada)	100%
DK Crown Holdings Inc.	United States (Delaware)	100%
DK Player Reserve LLC	United States (Delaware)	100%
DK Security Corporation	United States (Massachusetts)	100%
Crown DFS Inc.	United States (Delaware)	100%
Crown Gaming Inc.	United States (Delaware)	100%
Crown PA DFS Inc.	United States (Delaware)	100%
Crown MS Gaming Inc.	United States (Delaware)	100%
Crown NJ Gaming Inc.	United States (Delaware)	100%
Crown NV Gaming Inc.	United States (Delaware)	100%
Crown NY Gaming Inc.	United States (Delaware)	100%
Crown PA Gaming Inc.	United States (Delaware)	100%
Crown WV Gaming Inc.	United States (Delaware)	100%
DK-FH Inc.	United States (Delaware)	100%
Crown Europe Malta Limited	Malta	100%
Crown Gaming Malta Limited	Malta	100%
Crown DFS Malta Limited	Malta	100%
DraftKings Australia PTY Limited	Australia	100%
DKUK Services LTD	United Kingdom	100%
Crown IA Gaming LLC	United States (Delaware)	100%
Crown MA Gaming LLC	United States (Delaware)	100%
Crown IN Gaming LLC	United States (Delaware)	100%
Crown Gaming Ireland Limited	Ireland	100%
Crown NH Gaming LLC	United States (Delaware)	100%
Crown CO Gaming LLC	United States (Delaware)	100%
Crown TN Gaming LLC	United States (Delaware)	100%
Crown IL Gaming LLC	United States (Delaware)	100%

Crown MI Gaming LLC	United States (Delaware)	100%
Crown VA Gaming LLC	United States (Delaware)	100%
Crown AZ Gaming LLC	United States (Delaware)	100%
Crown Gaming RT LLC	United States (Delaware)	100%
DKDI LLC	United States (Delaware)	100%
SBTech (Global) Limited	Isle of Man	100%
Gaming Tech Ltd.	Israel	100%
SBTech Subsidiary Bulgaria (branch)	Bulgaria	100%
SBTech (Gibraltar) Limited	Gibraltar	100%
SBTech US Inc.	United States (Delaware)	100%
Sky Star Eight Limited	United Kingdom	100%
Lucrative Green Leaf Limited	Ireland	100%
Software Co-Work LLC	Ukraine	100%
Software Co-Work Cyprus Limited	Cyprus	100%
SBTech Malta Limited	Malta	100%
Vegas Sports Information Network, LLC	United States (Nevada)	100%
GUS I LLC	United States (Delaware)	100%
GUS II LLC	United States (Delaware)	100%
Crown OR Gaming LLC	United States (Delaware)	100%
Crown CT Gaming LLC	United States (Delaware)	100%
Crown WY Gaming LLC	United States (Delaware)	100%
Crown WA Gaming LLC	United States (Delaware)	100%
Crown DK CAN Ltd.	Canada (Alberta)	100%
Scarcity Labs Inc.	Canada (Alberta)	100%
Crown KS Gaming LLC	United States (Delaware)	100%
Crown LA Gaming LLC	United States (Delaware)	100%
Crown MD Gaming LLC	United States (Delaware)	100%
Crown ME Gaming LLC	United States (Delaware)	100%
Crown OK Gaming LLC	United States (Delaware)	100%
Crown AL Gaming LLC	United States (Delaware)	100%
Crown PR Gaming LLC	United States (Delaware)	100%
DK II Security Corporation	United States (Massachusetts)	100%

Crown FL Gaming LLC	United States (Delaware)	100%
Crown SD Gaming LLC	United States (Delaware)	100%
Blue Ribbon Software Ltd.	Israel	100%
Blue Ribbon Holding Limited	Malta	100%
Blue Ribbon Software Malta Limited	Malta	100%
Northside Crown Gaming LLC	United States (Delaware)	99%
LHGN Holdco, LLC	United States (Delaware)	100%
Golden Nugget Online Gaming, Inc.	United States (Delaware)	100%
Golden Nugget Online Gaming, LLC	United States (Delaware)	100%
Crown OH Gaming LLC	United States (Delaware)	100%
Crown CA Gaming LLC	United States (Delaware)	100%
Crown VI Gaming LLC	United States (Delaware)	100%
GNOG CAN Ltd.	Canada (Alberta)	100%
Crown MD Online Gaming LLC	United States (Delaware)	95%
DK Dash LLC	United States (Delaware)	100%
DK Crown Media LLC	United States (Delaware)	100%
DK Horse LLC	United States (Delaware)	100%
GNOG WA LLC	United States (Delaware)	100%
Crown MN Gaming LLC	United States (Delaware)	100%
Crown NE Gaming LLC	United States (Delaware)	100%
Crown KY Gaming LLC	United States (Delaware)	100%
DK MKT LLC	United States (Delaware)	100%
DK Draw LLC	United States (Delaware)	100%
Black Throne Studios LLC	United States (Delaware)	100%
Crown NC Gaming LLC	United States (Delaware)	100%
Crown VT Gaming LLC	United States (Delaware)	100%
Fortune Merger Sub Inc.	United States (Delaware)	100%
Fortune Merger Sub LLC	United States (Delaware)	100%

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-237693-01 and No. 333-238051) and Form S-8 (No. 333-264716) of DraftKings Inc. of our reports dated February 16, 2024, relating to the consolidated financial statements and the effectiveness of DraftKings Inc.'s internal control over financial reporting, which appear in this Annual Report on Form 10-K.

/s/ BDO USA, P.C.
Boston, Massachusetts

February 16, 2024

Certification of Principal Executive Officer Pursuant to Exchange Act Rule 13a-14(a)/15d-14(a) as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jason D. Robins, certify that:

1. I have reviewed this Annual Report on Form 10-K of DraftKings Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 16, 2024

/s/ Jason D. Robins

Jason D. Robins
Chief Executive Officer and Chairman of the Board
(Principal Executive Officer)

Certification of Principal Financial Officer Pursuant to Exchange Act Rule 13a-14(a)/15d-14(a) as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jason K. Park, certify that:

1. I have reviewed this Annual Report on Form 10-K of DraftKings Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 16, 2024

/s/ Jason K. Park

Jason K. Park
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Jason D. Robins, Chief Executive Officer and Chairman of the Board of DraftKings Inc. (the "Company"), hereby certify, that, to my knowledge:

1. The Annual Report on Form 10-K for the period ended December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 16, 2024

/s/ Jason D. Robins

Jason D. Robins
Chief Executive Officer and Chairman of the Board
(Principal Executive Officer)

Exhibit 32.2

Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Jason K. Park, Chief Financial Officer of DraftKings Inc. (the "Company"), hereby certify, that, to my knowledge:

1. The Annual Report on Form 10-K for the period ended December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 16, 2024

/s/ Jason K. Park

Jason K. Park
Chief Financial Officer
(Principal Financial Officer)



**EXECUTIVE COMPENSATION
CLAWBACK POLICY**



I. BACKGROUND

DraftKings Inc. (the "Company") has adopted this Executive Compensation Clawback Policy (this "Policy") to provide for the recovery or "clawback" of certain incentive compensation in the event of a Restatement (as defined below). This Policy is intended to comply with, and will be interpreted to be consistent with, the requirements of the Nasdaq Stock Market ("Nasdaq") Listing Rule 5608 (the "Listing Standard"). Certain capitalized terms used herein are defined in Section VIII of this Policy.

II. STATEMENT OF POLICY

Except to the extent provided under Section V, the Company shall recover reasonably promptly the amount of erroneously awarded Incentive-Based Compensation in the event that the Company is required to prepare an accounting restatement due to the material noncompliance of the Company with any financial reporting requirement under the securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period (each, a "Restatement").

III. SCOPE OF POLICY

A. Covered Persons and Recovery Period. This Policy applies to Incentive-Based Compensation received by a person:

- after beginning service as an Executive Officer,
- who served as an Executive Officer at any time during the performance period for that Incentive-Based Compensation,
- while the Company has a class of securities listed on a national securities exchange or a national securities association, and
- during the three completed fiscal years immediately preceding the date that the Company is required to prepare a Restatement (the "Recovery Period").

Notwithstanding the foregoing, the Company is only required to apply, and shall only apply, this Policy to Incentive-Based Compensation received by Executive Officers on or after October 2, 2023.

For purposes of this Policy, Incentive-Based Compensation shall be deemed "received" in the Company's fiscal period during which the Financial Reporting Measure specified in the Incentive-Based Compensation award is attained, even if the payment or grant of the Incentive-Based Compensation occurs after the end of that period.

B. Transition Period. In addition to the Recovery Period, this Policy applies to any transition period (that results from a change in the Company's fiscal year) within or immediately following the Recovery Period (a "Transition Period"); provided that a Transition Period between the last day of the Company's previous fiscal year end and the first day of the Company's new fiscal year that comprises a period of nine to 12 months will be deemed a completed fiscal year.

C. Determining Recovery Period. For purposes of determining the relevant Recovery Period, the date that the Company is required to prepare the Restatement shall be the earlier to occur of:



- the date the board of directors of the Company (the “Board”), a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare a Restatement, and
- the date a court, regulator, or other legally authorized body directs the Company to prepare a Restatement; provided that the determination and application of this Policy shall occur after such order is final and non-appealable.

For clarity, the Company’s obligation to recover erroneously awarded Incentive-Based Compensation under this Policy is not dependent on if or when a Restatement is filed.

D. Method of Recovery. Without limiting this Section III, the Compensation Committee of the Board (the “Compensation Committee”) will have discretion in determining the means to effectuate the recovery of erroneously awarded Incentive-Based Compensation under this Policy, recognizing that different means of recovery may be appropriate in different circumstances.

IV. AMOUNT SUBJECT TO RECOVERY

A. Recoverable Amount. The amount of Incentive-Based Compensation subject to recovery under this Policy is the amount of Incentive-Based Compensation received by any individual covered by this Policy pursuant to Section III that exceeds the amount of Incentive-Based Compensation that otherwise would have been received by such individual had it been determined based on the amounts after giving effect to the applicable Restatement, computed without regard to any taxes paid on such Incentive-Based Compensation.

B. Covered Compensation Based on Stock Price or TSR. For Incentive-Based Compensation based on stock price or total shareholder return (“TSR”), where the amount of erroneously awarded Incentive-Based Compensation is not subject to mathematical recalculation directly from the information in the applicable Restatement, (i) the recoverable amount shall be determined by the Compensation Committee based on a reasonable estimate of the effect of the Restatement on the stock price or TSR upon which the Incentive-Based Compensation was received and (ii) the Company shall maintain documentation of the determination of that reasonable estimate and provide such documentation to Nasdaq (or the Company’s then-applicable national securities exchange or national securities association).

V. EXCEPTIONS

The Company shall recover erroneously awarded Incentive-Based Compensation in compliance with this Policy, except to the extent that (i) either of the conditions set out below in this Section V are met and (ii) the Compensation Committee or, in the absence of a Compensation Committee comprised solely of independent directors, a majority of the independent directors serving on the Board, has made a determination that recovery would be impracticable:

A. Direct Expense Exceeds Recoverable Amount. The direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered; provided, however, that before concluding it would be impracticable to recover any amount of erroneously awarded Incentive-Based Compensation based on expense of enforcement, the Company shall make a reasonable attempt to recover such erroneously awarded Incentive-Based Compensation, document such reasonable attempt(s) to recover, and provide that documentation to Nasdaq (or the Company’s then-applicable national securities exchange or national securities association); or



B. Recovery from Certain Tax-Qualified Retirement Plans. Recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

VI. PROHIBITION AGAINST INDEMNIFICATION

Notwithstanding the terms of any indemnification arrangement or insurance policy with any individual covered by this Policy pursuant to Section III, the Company shall not indemnify any Executive Officer or former Executive Officer against the loss of erroneously awarded Incentive-Based Compensation, including any payment or reimbursement for the cost of insurance obtained by any such covered individual to fund amounts recoverable under this Policy.

VII. DISCLOSURE

The Company shall file all required disclosures with respect to this Policy and recoveries under this Policy in accordance with the requirements of the U.S. Federal securities laws, including the disclosure required by the applicable Securities and Exchange Commission ("SEC") filings.

VIII. DEFINITIONS

Unless the context otherwise requires, the following definitions apply for purposes of this Policy:

"Executive Officer" means the Company's president, principal financial officer, principal accounting officer (or if there is no such accounting officer, the controller), any vice-president of the Company in charge of a principal business unit, division, or function (such as sales, administration, or finance), any other officer who performs a policy-making function, or any other person who performs similar policymaking functions for the Company. Executive officers of the Company's subsidiaries are deemed Executive Officers of the Company if they perform such policymaking functions for the Company. The term "policy-making function" is not intended to include policy-making functions that are not significant. Identification of an Executive Officer for purposes of this Policy will include, at a minimum, the executive officers identified pursuant to 17 CFR 229.401(b).

"Financial Reporting Measures" means any of the following: (i) measures that are determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures that are derived wholly or in part from such measures, (ii) stock price and (iii) TSR. A Financial Reporting Measure need not be presented within the Company's financial statements or included in a filing with the SEC.

"Incentive-Based Compensation" means any compensation that is granted, earned, or vested based wholly or in part upon the attainment of a Financial Reporting Measure.

IX. ADMINISTRATION; AMENDMENT; TERMINATION

Unless expressly provided otherwise, all determinations under this Policy will be made by the Compensation Committee, including determinations regarding the means by which any recovery under this Policy shall be effectuated. Any determinations of the Compensation Committee will be final, binding and conclusive and need not be uniform with respect to each individual covered by this Policy.

The Compensation Committee may amend this Policy from time to time and may terminate this Policy at any time, in each case in its sole discretion, subject to applicable law, including but not limited to, the Listing Standard (or the listing standards of the Company's then-applicable national securities exchange or national



securities association).

X. EFFECTIVENESS; OTHER RECOUPMENT RIGHTS

This Policy shall be effective as of December 1, 2023. Notwithstanding the foregoing, the Company is only required to apply this Policy to Incentive-Based Compensation received on or after October 2, 2023. Any right of recoupment under this Policy is in addition to, and not in lieu of, any other remedies or rights of recoupment that may be available to the Company and its subsidiaries and affiliates under applicable law or pursuant to the terms of any similar policy or similar provision in any employment agreement, equity award agreement or similar agreement.

XI. EXCEPTIONS TO THIS POLICY; QUESTIONS

To the extent permitted by applicable law, exceptions to this Policy may be granted by the Compensation Committee or, in the absence of a Compensation Committee comprised solely of independent directors, a majority of the independent directors serving on the Board.

If you have any questions about this Policy or its application, please contact the Legal Department.

Exhibit 14



SBTech Betting Software



Adam Stevens
SENIOR SOFTWARE ENGINEER
LAST UPDATED: 01 JUN 2021



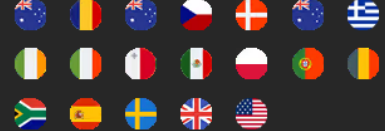
Products



Solutions



Markets



Banking



Licenses



SOLUTIONS

PRODUCTS

LICENSES

LOCALIZATION PERKS

PARTNERS

BRANDS

PAYMENT PROVIDERS

SUPPORT

CRM SOLUTIONS

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SBTech is considered to be among the best providers of sports betting solutions and services in the industry. It provides its sports betting and comprehensive iGaming solutions to tier 1 operators in regulated markets across multiple channels including online, mobile and retail (land-based). The company's complete offering features a full suite of highly customizable and innovative solutions available as turnkey and fully managed products.

SBTech was founded in 2007, and has over 50 partners worldwide. It has 2,300+ employees, is headquartered in Douglas, Isle of Man and has 13 additional offices across the globe that are located in the USA, the UK, Ireland, Gibraltar, Malta, Ukraine, Bulgaria, and Israel. Though SBTech is a privately held company, in April 2020 it became part of DraftKings, which is listed on the Nasdaq Stock Exchange. DraftKings includes an integrated B2B and B2C solution and is the first vertically integrated pure-play online gaming and sports betting company based in the USA.

The SBTech platform includes a full range of management services and the company has vast experience in compliance, covering 20+ regulated markets. Its platform includes its comprehensive Chameleon360 iGaming platform, which is equipped with an advanced management system, advanced dashboard and reporting features, a flexible payment gateway, third-party integrations, and a powerful CMS. Its sportsbook covers tens of thousands of pre-match and in-play events each month, offers over 2,000 proprietary bet markets on over 50 sports, and includes features such as live streaming, multiple cash out and Fast Market options.

In addition to its sportsbook and in-play betting products, the company also offers premium casino and live casino content as well as a retail solution for betting.

Over the years, it has won a number of EGR, SBC and GIA awards for its impressive sports betting solutions, including winning "Sports Betting Supplier of the Year" multiple times. Curious to learn more about this award-winning company to find out if it's the right sports book supplier for you? We'll give you the scoop in our SBTech review.

SBTech Betting Solutions

SBTech offers four different solutions. These include Sports Betting, iGaming Platform, Managed Services, and Retail & Omni-Channel. For the purpose of this SBTech platform review.



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SBTech offers four different solutions. These include Sports Betting, iGaming Platform, Managed Services, and Retail & Omni-Channel. For the purpose of this SBTech platform review, we'll be focusing on their sports betting and iGaming platforms for online businesses.

You have the option of a turnkey, fully managed services or consultancy. The sports betting platform can help you maximize your revenue with enhanced user experience. It allows for customized betting experiences, includes a powerful sportsbook engine, feed manager, flexible configuration, live streaming, engaging promotions and more.

As for the iGaming platform solution, this includes a payment gateway, CRM, casino and virtual sports content, reporting system, CMS and more.

The SBTech sports betting solution combined with its comprehensive Chameleon360 iGaming platform can provide you with:



**Sports,
betting and
data products**



Licensing



Partners



**Payment
gateway**



Support



**CRM &
Marketing**



**Affiliate
system**



**Front-end
flexibility**



**Advanced
reporting
features**



Pricing

SBTech Products

SBTech is a betting software provider that supplies sportsbook businesses with different products for their betting brands. Created by the company's trading, product development and operations teams, the following is what you can expect from the solution:

Robust sportsbook engine – A powerful sportsbook that runs 24/7 and includes 50,000+ events each month, including 25,000+ in-play matches. There are 2,000+ proprietary betting markets on over 50 sports.

- ✓ **Cash Out** – This feature is available on single and accumulator bets. It includes full cash out, partial cash out and bank my stake options. Operators can control payouts by managing commission and availability.
- ✓ **Bet Builder** – Players can make thousands of combinations, including markets for the match, goals corners, players and so on. There are also automated same game combinations.
- ✓ **Fast Markets** – Operators can profit from higher margin markets with 1 and 5 minute betting for basketball, football and point/game bets for tennis.
- ✓ **Feed Manger** – This allows operators to prioritize their data feed based on a sport, league or event.
- ✓ **Live Streaming** – Through SBTech's custom-designed visualization center there is live streaming for all sports. The visualization center also allows you to display scoreboards, statistics and split-screen odds.



iGaming Software Platforms

Solutions

Payments

Licenses

Extras ▾

Let's Talk

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streaming for all sports. The visualization center also allows you to display scoreboards, statistics and split-screen odds.



Live Trading – A Fully managed and real-time pricing and risk strategy service from SBTech's expert international team of 200+ traders.



Virtual Sports and Casino Games – There are over 3,000+ Virtual Sports, Casino and Live Casino games available through the SBTech iGaming platform if you are interested in offering different gambling products to complement your sports betting offering.

SBTech Licensing and Localization

SBTech is very experienced in regulated markets and is compliant with 20+ regulators. The company makes certain that you receive the best solution for your needs, meeting all regulatory requirements in any market. That being said, SBTech itself is licensed and regulated by the Malta Gaming Authority (MGA) and the UK Gambling Commission (UKGC).

Among its regulatory markets include:



SBTech offers full coverage and mitigation of existing regulatory risks. It allows you to enter new territories with quick ease due to the company's flexible regulations module, which is designed to adapt to any regulated market requirements. If you would like to learn more about SBTech's licenses and compliance and how this applies to your business, it is best to direct your queries to the company's staff.

In addition to regulated market compliance, SBTech has received certifications from eCOGRA, iTech Labs, GLI and ISO 27001.

Localization

Due to the fact that SBTech is compliant in a wide range of regulatory markets around the world, it should come as no surprise that the company can appeal to local markets. This includes support for multiple languages, local payments, multiple currencies, promotional campaigns, different odds formats and so on.

Examples of regions covered include:



SBTech Partners

SBTech has a number of third-party partners to help them deliver the best possible sports betting solution. Among their existing key supplier relationships for data and visualization partners include:



Betradar



IMG – Sports -Entertainment – Media



Perform Progressive Sports Media



Racing Post



iGaming Software Platforms

Solutions

Payments

Licenses

Extras ▾

Let's Talk

SOLUTIONS

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- ✓ Racing Post
- ✓ Press Association
- ✓ SIS

SBTech Brands

SBTech has over 50 clients across the globe. Some of their partners include:

SBTech Payments

A payment gateway, flexible wallet and KYC & Fraud Detection are part of the iGaming platform.

SBTech supports an array of the world's leading payment methods and aggregators with localized options. Among the different types of payment options available are credit/debit cards, eWallets, online bank transfers and prepaid cards.

Examples of some of the payments supported include:



SOLUTIONS

PRODUCTS

LICENSES

LOCALIZATION PERKS

PARTNERS

BRANDS

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FRONT END FLEXIBILITY

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As for KYC & Fraud Detection, this is provided via leading third-party and proprietary systems. It includes protocols for KYC (Know Your Customer), AML (Anti-Money Laundering), age verification and fraud detection. Third-party partners that provide these systems include CallCredit Information Group, GBG and Iovation.

SBTech Support

As a client of SBTech you can expect their customer support team to be readily available to help you with technical support and to answer any enquires you may have, including general questions and those related to your business.

That said, if you are seeking a customer support option for your players, the SBTech Managed Services solution provides fully managed services or consultancy for existing and new operators. In terms of customer support this includes multilingual support as well as assistance with building local teams in any market and covering operations, knowledge, methodology and so on.

SBTech CRM & Marketing

SBTech provides both CRM (Customer Relationship Management) as well as promotions to help improve player lifetime value.

CRM lets you manage your players with real-time engagement through chat and automatic multi-channel notifications. You can tailor a personalized betting experience for all your customers by tracking and analyzing player behavior with the help of sophisticated tools.

The CRM system is provided by third-party partners, including Xtreme push, Silverpop, Optimove, Dynamic Messaging, Urban Airship, Liveperson and Zendesk.

As for marketing to players, there are different promotional and bonus systems that can be implemented to reward players. The configurable automated bonus system includes treating players to odds boosts, free bets, enhanced accas, flexible cashback, and a sports loyalty program.

SBTech Affiliate System

Through the iGaming SBTech platform, an affiliate system can be implemented. By utilizing affiliate marketing software, operators can benefit from comprehensive multi-channel tracking and analytics as well as flexible commission plans. Affiliate systems are an excellent acquisition marketing strategy.

SBTech does not supply its own affiliate system, instead, it connects its clients with its affiliate partners. These include Income Access and NetRefer. Both are highly respected affiliate marketing specialists in the iGaming industry.

SBTech Front End

A flexible, omni-channel and user-friendly front-end is provided by SBTech. A smooth, easy to navigate and seamless experience can be enjoyed online by players across web, mobile, and native iOS and Android apps.

The sports betting product is a widget-based API solution. This gives you the freedom to create more of your front end independently with SBTech's APIs or you can build custom widgets to deploy together with the ones the company provides.

Additionally, operators can benefit from a powerful integrated CMS (Content Management System). This allows you to create any imaginable user experience, targeting each segment, including a special focus on SEO (Search Engine Optimization).

Already have a site? You can control the features that you want to use and seamlessly integrate them into your existing brand.



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them into your existing brand.

SBTech Back office

A powerful backend helps you to manage and stay in control of your business operations. The back office is equipped with a live reporting system, real-time tools and key segmentation. Features of the back-end include:

- ✓ **Risk management** – Prevention tools and processes to construct a fraud shield.
- ✓ **Performance dashboards** – Real-time views of operational performance from various perspectives at a variety of levels and details.
- ✓ **Detailed reporting breakdowns**- Real-time breakdowns for each sport, league and country as well as each customer, VIP level and risk level
- ✓ **Internal CRM tool** – Powering widgets and driving personalization.

Additionally, for operators who are not keen to run the back office themselves, they can have their business' risk management and analysis fully managed by professionals, including dedicated analysts.

SBTech Pricing & Time to Market

You can expect a quick time to market with SBTech. The company also offers fair pricing for its products and solutions.

With that said, the company does not provide general information pertaining to costs and launch times as what one customer wants or needs is different from the next.

You can quickly and easily obtain the relevant answers to your questions, a quote and a time to market estimation by contacting SBTech customer support and letting them know about your business plans.

SBTech Review Conclusion

SBTech has plenty to offer new sports betting businesses and existing brands. While it might not be the best solution for amateurs to the industry who may feel more comfortable with a white label option, if you have a business in mind and some experience with the sports betting and iGaming industries, SBTech can help you find the perfect solution that best suits your goals.

SBTech's regulation-ready Chamelon360 iGaming sports betting platform is one of the most innovative platforms around. It provides all the tools, systems and features you need to build a strong betting business. From detailed real-time reporting and business intelligence to CMS, CRM, a fully configurable automated bonus system, easy payment gateway integrations and more, operators have access to everything they need.

Want to find out exactly how SBTech can help bring your specific sports betting business goals to life so that you can start on a path toward success? Contact them today!



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NFT and Metaverse Gambling – The New Age of Online Crypto Gaming

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BeGambleAware



Exhibit 15



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DraftKings to Become Public Company, Creating the Only Vertically-Integrated U.S.-based Sports Betting and Online Gaming Company

DraftKings, Diamond Eagle Acquisition Corp. and SBTech Enter Business Combination Agreement

Institutional Investors Commit to Invest \$304 million at Closing

DraftKings CEO and Co-Founder Jason Robins to lead combined company

Investor Call Scheduled for Monday, December 23 at 11AM ET

BOSTON and LOS ANGELES – DECEMBER 23, 2019 – DraftKings Inc. (“DraftKings”), a digital sports entertainment and gaming company known for its industry-leading daily fantasy sports and mobile sports betting platforms, has entered into a definitive business combination agreement with Diamond Eagle Acquisition Corp. (Nasdaq: DEAC) (“Diamond Eagle”), a publicly traded special purpose acquisition company, and SBTech, an international turnkey provider of cutting-edge sports betting and gaming technologies.

The combined company will become the only vertically-integrated pure-play sports betting and online gaming company based in the United States. The transaction is expected to close in the first half of 2020. In connection with the closing of the transaction, Diamond Eagle intends to change its name to DraftKings Inc., reincorporate in Nevada and remain Nasdaq-listed under a new ticker symbol.

“The combination of DraftKings’ leading and trusted brand, deep focus on customer experience and data science expertise and SBTech’s highly innovative and proven technology platform creates a vertically-integrated powerhouse,” said Jason Robins co-founder and CEO of DraftKings. “I look forward to building significantly upon our goals of continuing our state-by-state rollout and creating the most entertaining and engaging customer experiences for sports fans globally.”

The new DraftKings will continue to be led by co-founder and CEO Jason Robins and will retain DraftKings’ highly experienced management team, including co-founders Paul Liberman and Matt Kalish. The SBTech management team who bring a wealth of international markets, trading and risk management experience will also be integrated into the organization.

Institutional investors (including funds managed by Capital Research and Management Company, Wellington Management Company and Franklin Templeton) have committed to a private investment of \$304 million in Class A common stock of the combined company that will close concurrently with the business combination and, subject to any redemptions by DEAC stockholders, there is \$400 million currently held in Diamond Eagle’s trust account. It is anticipated that the combined company will have an equity market capitalization at closing of approximately \$3.3 billion and have over \$500 million of unrestricted cash on the balance sheet.

“We are pleased to bring DraftKings and SBTech together as one public company,” said Harry E. Sloan, Founding Investor of Diamond Eagle. “DraftKings is already a premier online fantasy sports and betting platform. With the full integration of SBTech’s technology and innovative product expertise coupled with the right capitalization, DraftKings will be in a great position to continue its ambitious expansion plans in the United States. I have known Jason Robins for four years, and consider him a true entrepreneur. I believe our investors share my utmost respect for his vision and leadership.”

DraftKings Brand Highlights

- Since becoming the first mobile operator to launch in New Jersey in August 2018, DraftKings has consistently maintained greater than 30% online market share, and for the nine months ended September 30, 2019, the company recorded 8.5x year-over-year revenue growth in the state. DraftKings currently offers mobile and online sports betting in Indiana, New Jersey, Pennsylvania and West Virginia, and retail locations in Iowa, Mississippi, New Jersey and New York.

September 30, 2019, the company recorded 8.5x year-over-year revenue growth in the state.

DraftKings currently offers mobile and online sports betting in Indiana, New Jersey, Pennsylvania and West Virginia, and retail locations in Iowa, Mississippi, New Jersey and New York.

- DraftKings' daily fantasy sports product is available in 43 states and 8 international markets including Australia, Canada and the U.K., has approximately 60% market share and leverages its customer acquisition and cross-selling model for its sportsbook and iGaming offerings.
- DraftKings established a "one-platform" model by launching features like single sign-on, an integrated wallet and universal user profile, that allows a user to move seamlessly between a DFS contest, a sports wager and a hand of blackjack, enabling the company to quickly bring to market new offerings without reinventing the wheel of an entirely new back-end infrastructure.

SBTech Highlights

- SBTech is a premier global full-service B2B turnkey technology provider with omni-channel sports betting solutions, trading services, and marketing and bonus tools powering some of the world's most popular sports betting and online gaming brands.
- 50+ partners in 20+ regulated markets and jurisdictions including Czech Republic, Denmark, Ireland, Italy, Mexico, Portugal, Spain, Sweden, and U.K. and Arkansas, Indiana, Mississippi, New Jersey, Oregon and Pennsylvania in United States.
- Awarded exclusive contract offering mobile and retail sports betting for the Oregon state lottery with their Oregon Lottery Scoreboard brand.

"The combination of DraftKings and SBTech brings together two tech-native companies with the customer at their cores," said Gavin Isaacs, SBTech's Chairman. "SBTech will maintain its core business and continue its B2B focus. We are excited about the opportunity to join a company with a similar innovation DNA and create a unique and differentiated player in global sports betting and online gaming."

Key Transaction Terms

The respective boards of directors or managers, as applicable, of DraftKings, SBTech and Diamond Eagle have unanimously approved the proposed business combination. Completion of the proposed business combination is expected in the first half of 2020. The transaction will be effected pursuant to the terms and conditions of the Business Combination Agreement entered into by DraftKings, SBTech, and Diamond Eagle, and the other parties thereto, which contains customary closing conditions, including the registration statement being declared effective by the Securities and Exchange Commission ("SEC"), approval by the shareholders or members, as applicable, of DraftKings and SBTech (each of which has been obtained) and the stockholders of Diamond Eagle, and certain regulatory approvals.

Goldman Sachs is acting as exclusive financial advisor to Diamond Eagle. Raine Group is acting as exclusive financial advisor to DraftKings. Sullivan & Cromwell LLP is acting as legal advisor to DraftKings. Winston & Strawn LLP is acting as legal advisor to Diamond Eagle. Stifel is acting as financial advisor and Herzog, Fox & Neeman and Skadden, Arps, Slate, Meagher & Flom LLP are acting as legal advisors to SBTech. Goldman Sachs and Credit Suisse are acting as private placement agents to Diamond Eagle.

Conference Call and Webcast Information

Investors may listen to a pre-recorded call regarding the proposed business combination at 11:00 am EST on December 23, 2019. The live call may be accessed by dialing (877) 451-6152 for domestic callers or (201) 389-0879 for international callers. Once connected with the operator, please provide the conference ID of "13697668."

A replay of the call will also be available from 2:00 pm EST on December 23, 2019 to 11:59 pm EST on December 30th 2019. To access the replay, the domestic toll-free access number is (844) 512-2921 and participants should provide the conference ID of "13697668."

Please visit Diamond Eagle's website <http://eagleinvestmentpartners.com/> to access the webcast.

On the call, the presenters will be reviewing an investor presentation, which will be available on Diamond Eagle's website and filed with the SEC as an exhibit to a Current Report on Form 8-K prior to

Please visit Diamond Eagle's website <http://eagleinvestmentpartners.com/> to access the webcast.

On the call, the presenters will be reviewing an investor presentation, which will be available on Diamond Eagle's website and filed with the SEC as an exhibit to a Current Report on Form 8-K prior to the call, and available on the SEC website at www.sec.gov.

Additional Information about the Business Combination and Where to Find It

In connection with the proposed business combination, DEAC NV Merger Corp., a subsidiary of Diamond Eagle and the going-forward public company to be renamed DraftKings Inc. at closing ("New DraftKings"), intends to file a registration statement on Form S-4 (the "Registration Statement") with the SEC, which will include a proxy statement/prospectus, and certain other related documents, to be used at the meeting of stockholders to approve the proposed business combination. INVESTORS AND SECURITY HOLDERS OF DIAMOND EAGLE ARE URGED TO READ THE PROXY STATEMENT/PROSPECTUS, ANY AMENDMENTS THERETO AND OTHER RELEVANT DOCUMENTS THAT WILL BE FILED WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT DRAFTKINGS, SBTECH, DIAMOND EAGLE AND THE BUSINESS COMBINATION. The definitive proxy statement will be mailed to shareholders of Diamond Eagle as of a record date to be established for voting on the proposed business combination. Investors and security holders will also be able to obtain copies of the Registration Statement and other documents containing important information about each of the companies once such documents are filed with the SEC, without charge, at the SEC's web site at www.sec.gov, or by directing a request to: Diamond Eagle Acquisition Corp., 2121 Avenue of the Stars, Suite 2300, Los Angeles, California, Attention: Eli Baker, President, Chief Financial Officer and Secretary, (310) 209-7280.

Participants in the Solicitation

Diamond Eagle and its directors and executive officers may be deemed participants in the solicitation of proxies from Diamond Eagle's shareholders with respect to the business combination. A list of the names of those directors and executive officers and a description of their interests in Diamond Eagle is contained in the final prospectus for Diamond Eagle's initial public offering, which was filed with the SEC on May 14, 2019, and is available free of charge at the SEC's web site at www.sec.gov, or by directing a request to Diamond Eagle Acquisition Corp., 2121 Avenue of the Stars, Suite 2300, Los Angeles, California, Attention: Eli Baker, President, Chief Financial Officer and Secretary, (310) 209-7280. Additional information regarding the interests of such participants will be set forth in the Registration Statement for the proposed business combination when available.

Each of DraftKings and SBTech and its directors and executive officers may also be deemed to be participants in the solicitation of proxies from the shareholders of Diamond Eagle in connection with the proposed business combination. A list of the names of such directors and executive officers and information regarding their interests in the business combination will be contained in the Registration Statement for the business combination when available.

About DraftKings

DraftKings is a U.S.-based digital sports entertainment and gaming company created to fuel the competitive spirits of sports fans with offerings that range across daily fantasy sports, sports betting and regulated gaming. Founded in 2011 by Jason Robins, Matt Kalish and Paul Liberman, DraftKings' daily fantasy sports product is available in 8 countries internationally with 15 distinct sport categories. Launched in 2018, DraftKings Sportsbook offers mobile and retail betting for major national and global sports, and currently operates pursuant to state regulations in Indiana, Iowa, Mississippi, New Jersey, New York, Pennsylvania and West Virginia. DraftKings is the Official Daily Fantasy Partner of the NFL and PGA Tour as well as an Authorized Gaming Operator of the MLB and NBA. Headquartered in Boston, DraftKings holds offices across the country including Las Vegas, New Jersey, New York, and San Francisco.

About SBTech

SBTech is a global leader in omni-channel sports betting and gaming, with more than 1,200 employees in 10 offices worldwide. Since 2007, the group has developed the industry's most powerful online sports betting and casino platform, serving licensees in more than 15 regulated territories. SBTech's clients include many of the world's premier betting and gaming operators, state lotteries, land-based casinos, horse racing companies, and iGaming start-ups. The group supplies highly flexible betting and gaming solutions to clients looking for exceptional configurability and the quickest route to market,

clients include many of the world's premier betting and gaming operators, state lotteries, land-based casinos, horse racing companies, and iGaming start-ups. The group supplies highly flexible betting and gaming solutions to clients looking for exceptional configurability and the quickest route to market, complemented by proven business intelligence and reporting capabilities. The SBTech offering includes its seamless sportsbook, Chameleon360 igaming platform, managed services, on-property sportsbook and omni-channel solutions that provide players with constant access to sports and casino products across all online, mobile and retail channels. Supported by unrivalled expertise in trading and risk management, acquisition and CRM, and the highest standards of regulatory compliance, SBTech's partners consistently achieve rapid growth, enhanced brand loyalty and record revenues.

About Diamond Eagle Acquisition Corp.

Founded by media executive Jeff Sagansky and founding investor Harry Sloan, Diamond Eagle Acquisition Corp. was formed for the purpose of effecting a merger, capital stock exchange, asset acquisition, stock purchase, reorganization or similar business combination with one or more businesses.

Forward-Looking Statements

Certain statements made in this release are "forward looking statements" within the meaning of the "safe harbor" provisions of the United States Private Securities Litigation Reform Act of 1995. When used in this press release, the words "estimates," "projected," "expects," "anticipates," "forecasts," "plans," "intends," "believes," "seeks," "may," "will," "should," "future," "propose" and variations of these words or similar expressions (or the negative versions of such words or expressions) are intended to identify forward-looking statements. These forward-looking statements are not guarantees of future performance, conditions or results, and involve a number of known and unknown risks, uncertainties, assumptions and other important factors, many of which are outside Diamond Eagle's, DraftKings' or SBTech's control, that could cause actual results or outcomes to differ materially from those discussed in the forward-looking statements. Important factors, among others, that may affect actual results or outcomes include the inability to complete the business combination (including due to the failure to receive required shareholder approvals, failure to receive approvals or other determinations from certain gaming regulatory authorities, or the failure of other closing conditions); the inability to recognize the anticipated benefits of the proposed business combination; the inability to obtain or maintain the listing of the New DraftKings' shares on Nasdaq following the business combination; costs related to the business combination; the risk that the business combination disrupts current plans and operations as a result of the announcement and consummation of the business combination; New DraftKings' ability to manage growth; New DraftKings' ability to execute its business plan and meet its projections; potential litigation involving Diamond Eagle, DraftKings, SBTech, or after the closing, New DraftKings; changes in applicable laws or regulations, particularly with respect to gaming, and general economic and market conditions impacting demand for DraftKings or SBTech products and services, and in particular economic and market conditions in the media/entertainment/gaming/software industry in the markets in which DraftKings and SBTech operate; and other risks and uncertainties indicated from time to time in the proxy statement/prospectus relating to the business combination, including those under "Risk Factors" therein, and in Diamond Eagle's other filings with the SEC. None of Diamond Eagle, DraftKings or SBTech undertakes any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

No Offer or Solicitation

This press release does not constitute a solicitation of a proxy, consent or authorization with respect to any securities or in respect of the proposed transaction. This press release also does not constitute an offer to sell or the solicitation of an offer to buy any securities, nor will there be any sale of securities in any states or jurisdictions in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities will be made except by means of a prospectus meeting the requirements of section 10 of the Securities Act of 1933, as amended, or an exemption therefrom.

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Jeff Pryor/Priority PR for Diamond Eagle

the inability to recognize the anticipated benefits of the proposed business combination; the inability to obtain or maintain the listing of the New DraftKings' shares on Nasdaq following the business combination; costs related to the business combination; the risk that the business combination disrupts current plans and operations as a result of the announcement and consummation of the business combination; New DraftKings' ability to manage growth; New DraftKings' ability to execute its business plan and meet its projections; potential litigation involving Diamond Eagle, DraftKings, SBTech, or after the closing, New DraftKings; changes in applicable laws or regulations, particularly with respect to gaming, and general economic and market conditions impacting demand for DraftKings or SBTech products and services, and in particular economic and market conditions in the media/entertainment/gaming/software industry in the markets in which DraftKings and SBTech operate; and other risks and uncertainties indicated from time to time in the proxy statement/prospectus relating to the business combination, including those under "Risk Factors" therein, and in Diamond Eagle's other filings with the SEC. None of Diamond Eagle, DraftKings or SBTech undertakes any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

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